Key Analyst Reports on UNE-P

August 2002

USB WARBURG

Global Equity Research

UBS Warburg

August 20, 2002 **Telecommunications--Wireline** **United States**

SBC Communications, Inc. (SBC)[2,37,80] Hold

Key Statistics

Price	$29.87
52-Wk Range	$47-23
Price Target	$30 00
Return Pot'l.	4.0%
Mkt. Cap(MM)	$99,321
Sh. Out.(MM)	3,325.1
Float	100%
Inst. Hldgs.	47 0%
Avg. Volume(K)	8,803
Curr.Div./Yield	$1.08/3.6%
Sec.Grwth.Rate	3%
Convertible?	No

Quarterly Earnings Per Share (fiscal year ends December)

	2001A	2002E	*Prev*	2003E	*Prev*
1Q	$0.51	$0.51A			
2Q	0 61	0 61A			
3Q	*0.59*	*0.58*			
4Q	0.64	0.61			
Year	**$2.35**	**$2.31**		**$2.25**	***$2.36***
FC Cons.:	$2.35	$2 30		$2 36	
P/E:	12.7x	12.9x		13.3x	
Revs.(MM):	$45,908	$43,325		$42,308	

SBC Communications through its brands—Southwestern Bell, Ameritech, Pacific Bell, SBC Telecom, Nevada Bell, SNET, and Cingular—provides local and long distance wireline service, wireless and data communications, high-speed Internet access and messaging services, as well as directory advertising and publishing SBC is the second-largest U.S. local service provider. Cingular Wireless, its 60.40 joint venture with BellSouth (SBC has 60%), is the second-largest U S wireless provider, with more than 22 million subs

Source UBS Warburg LLC and First Call consensus estimates

Revenues do not include proportionate share from Cingular.

SBC: Downgrading to Hold from Buy Based on Competitive Fears from UNE-P

Summary

DETAILED UNE-P STUDY. We have completed an analysis of UNE-P based economics from a Bell perspective and found 1) economics per line lost is worse than expected, with the average wholesale line producing negative EBITDA in SBC's region, 2) *line loss is expected to grow rapidly as we estimate the company* will lose 1M to UNE-P in the third quarter alone and 3) the long distance opportunity is only a partial offset as the EBITDA effects of UNE-P are hard to counter with low margin LD.

Action

DOWNGRADE TO HOLD. We are downgrading shares of SBC to Hold from Buy based on our UNE-P analysis. We anticipate that the growth of UNE-P will have a significant impact on SBC's 2003 earnings and that it will be difficult for the company to hit the Street's growth expectations for the year.

Valuation

LOWER PRICE TARGET TO $30. Our new price target of $30 per share (prev. $36) is based on our discounted cash flow analysis. This lowered target incorporates changes to our models to reflect the effects of UNE-P based competition.

Additional Information

We will be holding a conference call to discuss our analysis of UNE-P economics for the Bells on August 20th at 11:00am. Dial-in information is 800-665-0430 in the U.S. or 913-981-5591 international.

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Companies mentioned and disclosures at end of note

SBC – In the UNE-P Wheelhouse

SBC has lost more retail lines to UNE-P than any other Bell at 3.45 million, including 692,000 in the second quarter alone. The 692,000 UNE-P lines equate to 1.27% of SBC's 54.8 million total retail access lines at the end of the first quarter while the imbedded base equates to 5.9% of the company's total switched lines (including wholesale). In the second quarter, SBC added 494,000 residential UNE-P lines, representing more than 51% of the loss in the retail residential line base. Second line losses accounted for another 26% of retail residential line losses while management suggested seasonality contributed the bulk of the remainder.

Table 1: Access Lines Statistics for SBC (000s)

	1Q01	2Q01	3Q01	4Q01	1Q02	2Q02
Total access lines	61,254	60,578	60,230	59,532	59,036	58,255
% growth	-2.5%	-3.7%	-4.0%	-4.7%	-5.0%	-4 7%
Net Adds	-16	-676	-348	-698	-496	-781
UNE-P	1,373	1,760	2,159	2,403	2,761	3,453
Net Adds	361	387	399	244	358	692
% of total lines	2 2%	2 9%	3 6%	4 0%	4.7%	5 9%
Retail residential lines	35,878	35,255	34,946	34,518	34,129	33,168
% growth	-2.6%	-3.7%	-3.8%	-4.3%	-4 9%	-5 9%
Net Adds	-200	-623	-309	-428	-389	-961
Residential UNE-P	70	94	89	92	162	656
Net Adds	-6	24	-5	3	70	494
% of res lines lost	-3.0%	3.9%	-1.6%	0.6%	17 9%	51.4%

Source: UBS Warburg LLC estimates

We believe SBC has the most attractive region for UNE-P providers. The average monthly bill for local service is among the highest while its UNE-P rates are the lowest, making it relatively easy for competitors to earn decent margins. This is especially true in the Ameritech region. Ameritech and California also have a large number of dense urban areas with very low loop rates that provide ample feeding ground for resellers.

Based on our analysis, SBC also takes the hardest hit for each retail line lost to UNE-P competitors. We estimate that the company loses approximately $19.76 in net revenue per line per month for each retail line lost to competitors. This compares to $17.89 for Verizon, $18.29 for BellSouth and $14.73 for Qwest. In the Ameritech region, where the company is under full-scale attack, the company loses approximately $21.73 per line per month in net revenue. The EBITDA impact is also most severe at SBC. We believe the company generates over $13.53 in EBITDA per retail residential line per month but *loses* roughly $3.51 in EBITDA per month on lines converted to wholesale via UNE-P. SBC is the only Bell to generate more than $1.00 of negative EBITDA per month on its wholesale line base. Thus the negative EBITDA swing from retail to wholesale is more than $17.00 per line per month, also the largest for the Bells with the other three in the -$12 to -$16 range. In the Ameritech region, this figure is approximately -$19.00 per line.

Line losses to UNE-P have shifted from the business to the residential market. In the second quarter, UNE-P took 494,000 residential lines and just 117,000 business lines, down from 393,000 business lines in the first quarter. Michigan was hit hardest with 184,000 lines converted from retail to wholesale in the state during the second quarter. **AT&T, which began marketing in January 2002, claims to have garnered 6% residential market share in Michigan six months.** Texas has seen the largest total line loss to date from UNE-P with over 1.57 million wholesale lines (both UNE-P and TSR) in the state. Wholesale net adds have slowed dramatically in Texas, however, as AT&T has pulled back on its marketing efforts due to relatively low discounts available.

We expect line loss to continue to ramp up in SBC territory in the second half of 2002 and believe the company will lose approximately 1 million retail lines to UNE-P in the third quarter. We believe that roughly half of the line loss in the second quarter occurred in the month of June. Considering the steep growth within the second quarter and AT&T's entry into the Ohio and Illinois markets in mid-June and the California market in early August, our numbers could prove conservative. With another 1.2 million UNE-P line projected for the fourth quarter, we now expect residential line loss of 9.1% and 12.6% in the third and fourth quarter, respectively. This also suggests that by year end, 10% of total switched access lines will be UNE-P. Again, we note that our analysis suggests that wholesale lines generate negative EBITDA on a weighted average basis. In 2003, we expect the company to lose 3.41 million lines, up from 3.25 million for all of 2002.

Much depends on the company's ability to secure long distance approval in California in the near term, which should dampen (but by no means eliminate) line loss while helping to offset much of the revenue loss, similar to the results in 271-approved Southwestern Bell states. The Administrative Law Judge (ALJ) in California has approved the company's application and the full public utility commission to is expected to vote on September 19th, a short delay from the recently proposed date of August 22nd. A positive outcome for the Bell could enable SBC to begin marketing interLATA services in California in late December. Ameritech is a different story however, as we do not expect the company to receive approval for long distance in these states until the second half of 2003.

Estimates and valuation

Based on changes to our model resulting from this analysis, we are reducing our 2003 EPS estimate to $2.25 from our previous estimate of $2.36, while maintaining our 2002 EPS estimate at $2.31. This translates to a 2.3% decline in EPS in 2003 versus our previous estimate for 2.1% growth. It compares unfavorably with the 1.8% EPS decline we continue to expect for 2002. We now expect total proportionate revenues to decline by 1.3% in 2003 following the 3.9% decline in 2002. Our previous estimate was suggesting a 1.1% growth in revenues. We now expect EBITDA to decline by 1.9% versus our previous assumption for a 0.5% growth in 2003.

SBC is currently trading at roughly 13.3x our new estimates for 2003. Given that we do not expect the company to generate enough growth to reach its 2001 EPS of $2.35 until 2006, we believe it will be difficult for the company to outperform the market at these levels. In calculating our new 12-month price target of $30 per share, we conducted a discounted cash flow analysis, employing a 7% discount rate, a terminal value that assumes 2.5% perpetuity growth and a 20% private market discount.

Table 2: Changes to SBC Estimates ($MM)

	2002				2003				% growth	
	Old	New	$ change	% Change	Old	New	$ change	% Change	Old	New
Wireline Revenue	38,768	38,601	-167	-0.4%	38,884	37,482	-1,402	-3.6%	0.3%	-2 9%
Total Revenue	52,372	52,205	-167	-0.3%	52,937	51,535	-1,402	-2.6%	1.1%	-1 3%
EBITDA	21,377	21,357	-20	-0.1%	21,479	20,958	-521	-2 4%	0.5%	-1.9%
Net Income	7,728	7,715	-13	-0 2%	7,811	7,462	-349	-4.5%	1.1%	-3.3%
EPS	$2 31	$2.31	($0 00)	-0.2%	$2 36	$2 25	($0.11)	-4 5%	2 1%	-2.3%

Source: UBS Warburg LLC estimates

Statement of Risk

Risks include management's ability to execute, potential adverse changes in regulation, changes in technology, the effects of a weak economy, increasing competition and a large degree of operating leverage.

Global rating definitions and allocation

Rating	Definition	% of companies under coverage with this rating	% for which IB services have been provided
Strong Buy	Greater than 20% excess return potential; high degree of confidence	12%	53%
Buy	Positive excess return potential	39%	38%
Hold	Low excess return potential; low degree of confidence	44%	28%
Reduce	Negative excess return potential	4%	22%
Sell	Greater than 20% negative excess return potential; high degree of confidence	1%	11%

Excess return: Target price / current price – 1 + gross dividend yield – 12-month interest rate. The 12- month interest rate used is that of the company's country of incorporation, in the same currency as the predicted return.
*Investment banking services include, but are not restricted to, acting as manager/co-manager in the underwriting or placement of securities (within the past three years), acting as financial advisor, and/or providing corporate finance or capital-markets-related services to a company or one of its affiliates or subsidiaries (within the past 12 months).

Source: UBS AG, its subsidiaries and affiliates; as of 30 June 2002.
2. UBS AG, its affiliates or subsidiaries has acted as manager/co-manager in the underwriting or placement of securities of this company or one of its affiliates within the past three years.
37. Within the past 12 months, UBS AG, its affiliates or subsidiaries has received compensation for investment banking services from this company.
80. UBS AG, its affiliates or subsidiaries expect to receive or intend to seek compensation for investment banking services from this company within the next three months.

Unless otherwise indicated, please refer to the Valuation and Risk sections contained within the body of this report.
For a complete set of disclosure statements associated with the companies discussed in this report, including information on valuation and risk, please contact UBS Warburg LLC, 1285 Avenue of Americas, New York, New York, 10019, Attention: Publishing Administration.

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The Regional Bells: How Much Pain from UNE-P?

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UNE-P Economics: Downgrading the Bells

- **Downgrading BellSouth , SBC and Verizon to Hold from Buy**
  - Analysis of UNE-P economics suggests pressure on profitability for the Bells
  - We now expect earnings to decline 1.8% vs. prev. expectation for 2.6% growth (Street estimates are for 2-5% growth).
  - We expect long-term FCF growth of 2-3% vs prev. expectation for 3-4% growth
- **Lowering Price Targets**
  - New price targets based on our reduced FCF estimates in our DCF analyses:
    - BellSouth: $26 (previously $28);
    - SBC: $30 (previously $36);
    - Verizon: $34 (previously $50)
- **We Expect Market Performance Over the Next 12 Months**
  - Attractive dividend yields should limit downside

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UNE-P Economics : Changes to Estimates

BellSouth

	2002				2003				% growth	
	Old	New	$ change	% Change	Old	New	$ change	% Change	Old	New
Wireline Revenue	18,421	18,312	-109	-0.6%	18,731	17,993	-738	-3.9%	1.7%	-1.7%
Total Revenue	29,009	28,900	-109	-0.4%	29,582	28,842	-740	-2.5%	2.0%	-0.2%
EBITDA	12,837	12,784	-53	-0.4%	13,120	12,761	-359	-2.7%	2.2%	-0.2%
Net Income	4,035	3,924	-111	-2.7%	4,217	3,836	-380	-9.0%	4.5%	-2.2%
EPS	$2.14	$2.09	($0.05)	-2.3%	$2.18	$2.02	($0.16)	-7.3%	1.9%	-3.2%

SBC

	2002				2003				% growth	
	Old	New	$ change	% Change	Old	New	$ change	% Change	Old	New
Wireline Revenue	38,768	38,601	-167	-0.4%	38,884	37,482	-1,402	-3.6%	0.3%	-2.9%
Total Revenue	52,372	52,205	-167	-0.3%	52,937	51,535	-1,402	-2.6%	1.1%	-1.3%
EBITDA	21,377	21,357	-20	-0.1%	21,479	20,958	-521	-2.4%	0.5%	-1.9%
Net Income	7,728	7,715	-13	-0.2%	7,811	7,462	-349	-4.5%	1.1%	-3.3%
EPS	$2.31	$2.31	($0.00)	-0.2%	$2.36	$2.25	($0.11)	-4.5%	2.1%	-2.3%

Verizon

	2002				2003				% growth	
	Old	New	$ change	% Change	Old	New	$ change	% Change	Old	New
Wireline Revenue	40,912	40,897	-15	0.0%	39,655	39,136	-519	-1.3%	-3.1%	-4.3%
Total Revenue	66,737	66,722	-15	0.0%	67,092	66,575	-518	-0.8%	0.5%	-0.2%
EBITDA	29,049	28,772	-277	-1.0%	28,836	28,160	-676	-2.3%	-0.7%	-2.1%
Net Income	8,332	8,150	-182	-2.2%	8,587	8,130	-457	-5.3%	3.1%	-0.2%
EPS	$3.05	$2.98	($0.07)	-2.2%	$3.12	$2.96	($0.16)	-5.1%	2.3%	-0.7%

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UNE-P Economics: Glossary

- **Unbundled Network Elements (UNE)**
  - The individual parts of the local telephone network (7 elements including: local loop, switches, transport and OSS) that ILECs are required to "unbundle" and lease out to CLECs. Competitors can lease out one or all of the available UNEs to provide service.
- **Unbundled Network Element-Platform (UNE-P)**
  - Use of *ALL* the UNEs to provide service, requiring minimal capital outlays or asset deployment.
- **Retail Lines**
  - Access lines sold directly to the end user from the ILEC.
- **Wholesale Lines**
  - Access lines sold to competitors (AT&T and MCI), which resell the lines to end users.

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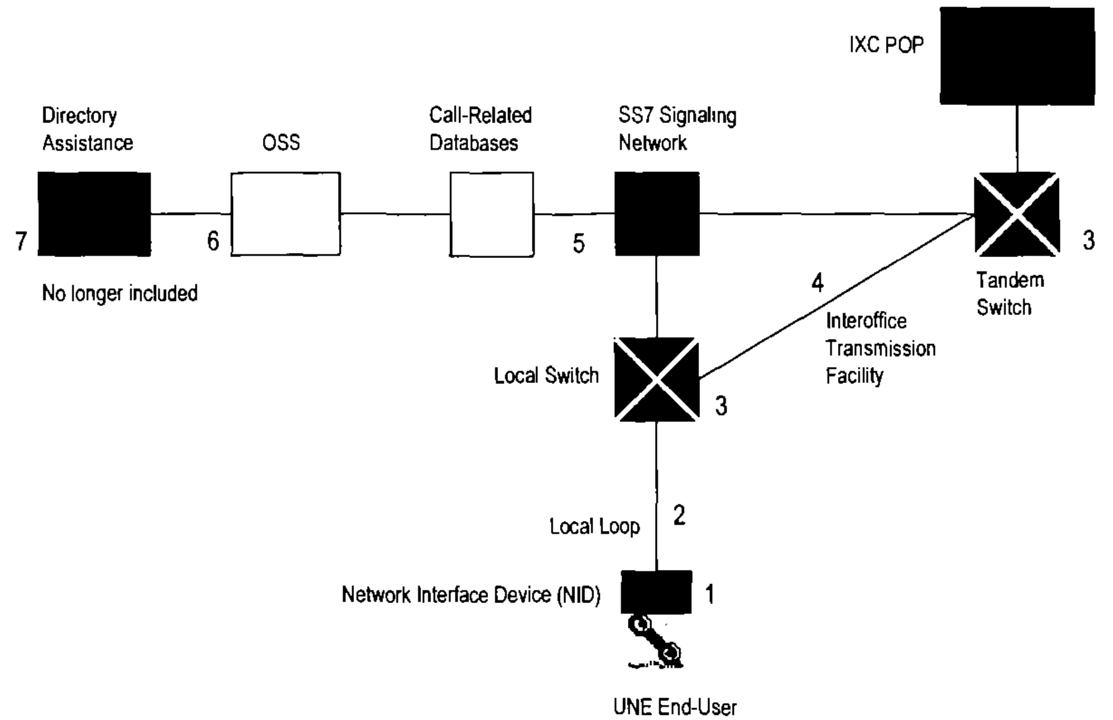
UNE-P Economics: UNE-P Diagram



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UNE-P Economics: What's the Big Deal?

- **UNE-P Competition Has Intensified in Recent Months...**
  - MCI's Neighborhood Plan (commenced in April '02; exited 2Q with 800K lines)
  - AT&T (recently entered 3 SBC states [24M residential lines]; plans to enter NJ [4.5M residential lines] in Sept 2002)
  - Other operators
    - Sprint is considering this strategy; others include Z-Tel, Talk America, and SupraTelecom (which added 120K UNE-P lines in FL in 2Q02)
- **Due to More Favorable Economics of UNE-P for Competitors**
  - Public Utility Commissions continue to set lower rates
    - Recent reductions in California, New York, New Jersey, Pennsylvania
- **Second Quarter Results Revealed the Bells' Exposure**
  - Over 1.1 million retail lines converted to wholesale through UNE-P in 2Q
    - SBC: 692K added vs. 358K in 1Q02;
    - BellSouth: 278K added, vs 239K in 1Q02;
    - Verizon: 110K added vs. 64K in 1Q02

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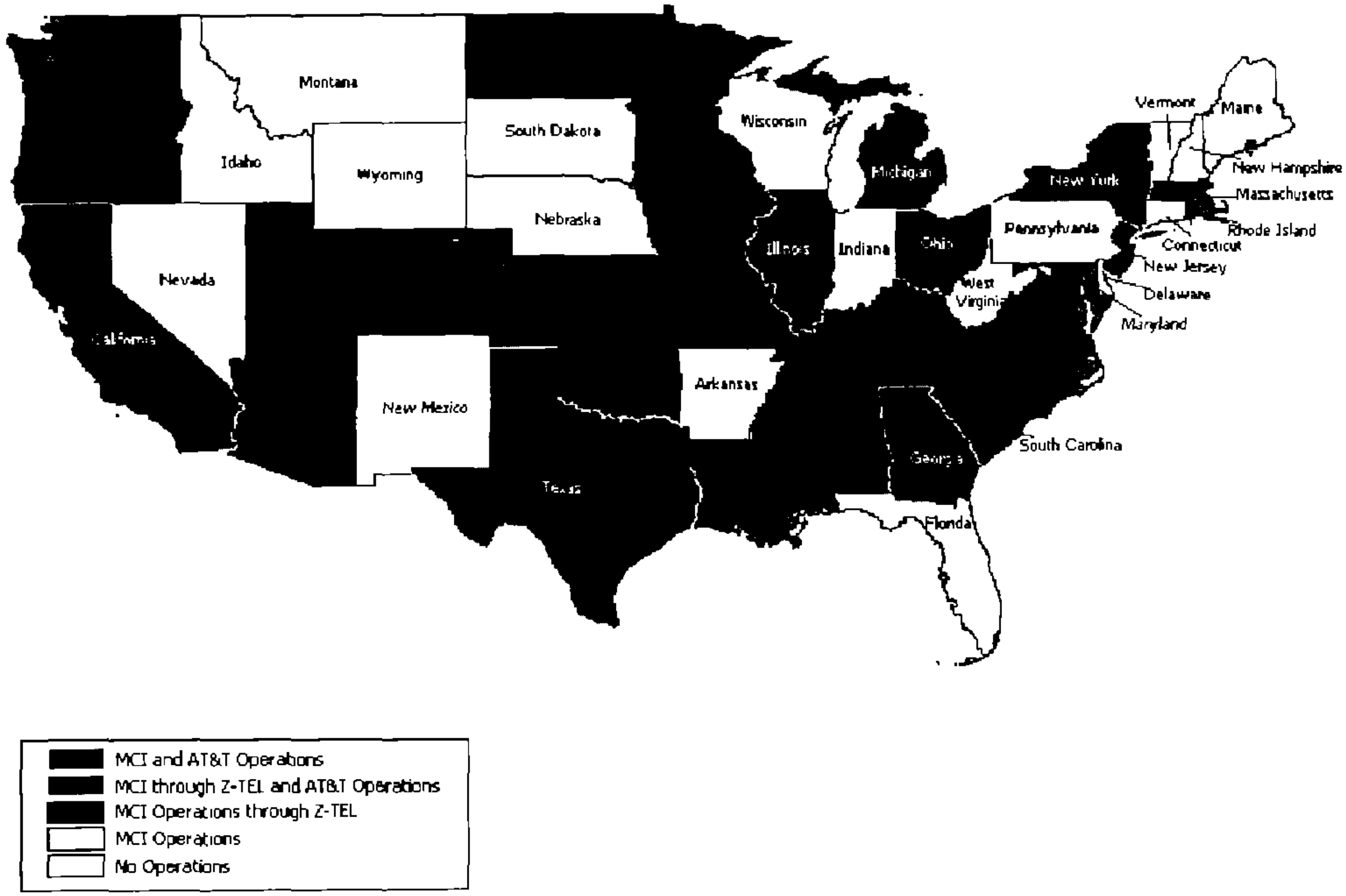
UNE-P Economics: The Rebundlers



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UNE-P Economics: Summary Findings

- **Economics of UNE-P are Worse than We Originally Expected**
  - **UNE-P lines generate negative EBITDA in 18 states for the Bells (60% of US residential lines)**
  - SBC's Ameritech region is the most attractive for UNE-P competitors
- **UNE-P Line Growth Will Be Greater than the Market Expects**
  - **UNE-P lines can be profitable in 33 states, suggesting further entry (82% of US residential access lines)**
  - AT&T presents the most significant threat.
    - Its 40% share of the consumer LD market presents an immediate target
    - AT&T sees opportunities in 14-17 states, but announced entry in 8 states.
  - The Bells exited 2Q02 with 7.5M UNE-P lines (5% penetration).

	2000a	2001a	2002e	2003e	2004e	2005e
UNE-P Lines	2,923	5,652	11,152	18,146	22,367	25,136
UNE-P Penetration	1.7%	3.4%	7.2%	12.2%	15.2%	17.3%

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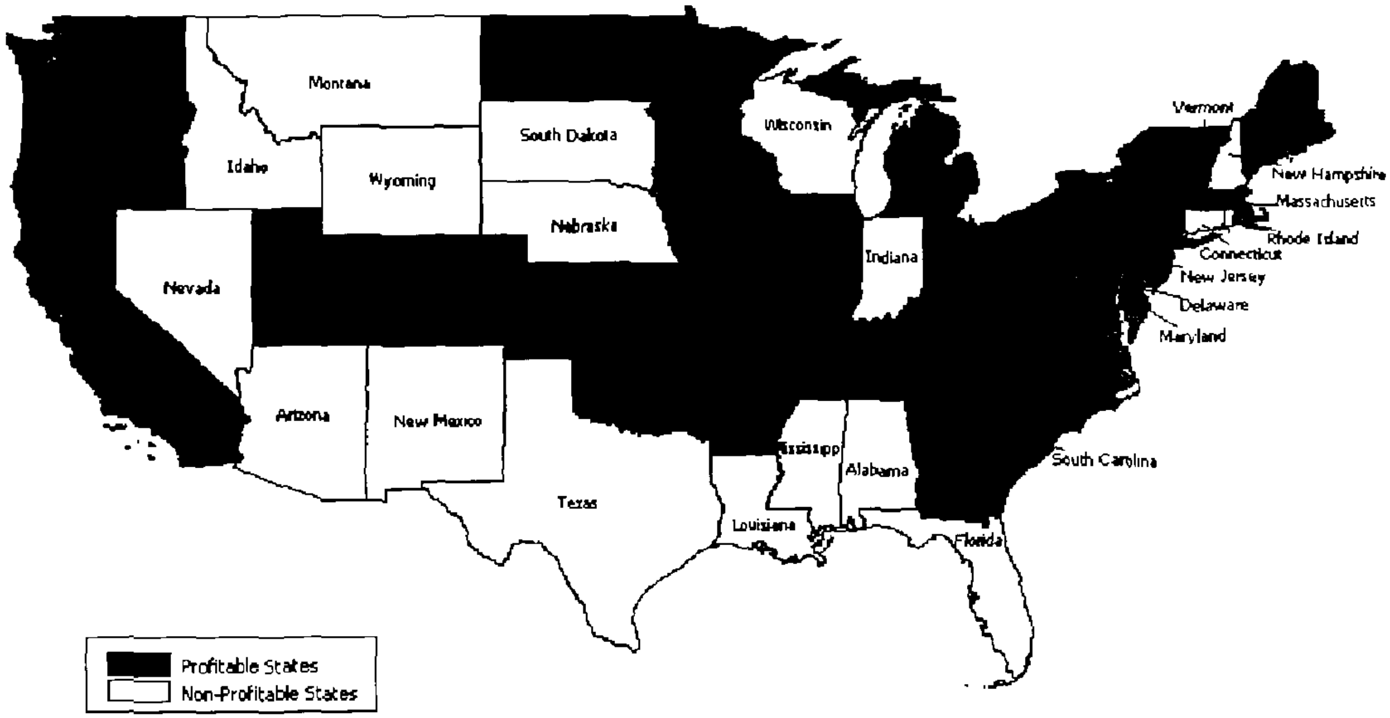
UNE-P Economics: Summary Findings



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UNE-P Economics: Summary Findings

♦ Long Distance Opportunity is Only a Partial Offset

- Bells only need to add _1.3_ long distance customers for each UNE-P line added to breakeven at *revenue* line
- However, the Bells need to add _5.4_ long distance customers for each UNE-P line added to breakeven at *EBITDA* line
- **UNE-P IS AN EBITDA STORY, NOT A REVENUE STORY**

	2002e	2003e	2004e	2005e
LD subs	19,905	34,524	41,460	45,223
UNE-P subs	11,152	18,146	22,367	25,136
LD subs / UNE-P subs	**1.8**	**1.9**	**1.9**	**1.8**

♦ We Do Not Expect Near-Term Regulatory Relief

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UNE-P Economics: Summary Findings

- **Anticipate that EPS Will Decline in 2003 for the Bells**
  - EPS highly sensitive to growth in UNE-P

	Revenue lost	EBITDA lost	EPS Impact assuming local line loss of				Free Cash flow Impact			
	per line / mo	per line / mo	1M	2M	3M	5M	1M	2M	3M	5M
SBC	$19.76	$17.04	$0.04	$0.08	$0.12	$0.20	$137	$274	$411	$685
VZ	17.89	15.26	0.04	0.09	0.13	0.22	123	245	368	614
BLS	18.29	15.65	0.06	0.13	0.19	0.32	126	252	377	629
Q	14.73	11.98	0.05	0.09	0.14	0.24	96	193	289	481

  - We estimate that 8M lines lost translates into $1B OpFCF loss

- **Summary**

Poor Economics of UNE-P + Higher UNE-P Line Loss = Lower Profit and EPS for the Bells

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UNE-P Economics: Calculating the Impact

1) Calculate Revenue Impact Per Line Lost

2) Estimate Average *Retail* COGS and SG&A per Line Based on Existing Wireline EBITDA Margins

3) Calculate Wholesale EBITDA Contribution

4) Estimate Future Line Loss in Each State

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UNE-P Economics: Calculating the Impact

1) Calculated Revenue Impact Per Line Lost

Local service revenue =	+ Basic local	Retail Revenue
	+ *Vertical Features*	
	+ Access/IntraLATA toll	
	+ SLC	
	+ LNP, 911 and other surcharges	
UNE-P revenue =	+Loop	Wholesale Revenue
	+Local switching (fixed & variable)	
	+Tandem switching	
	+Transport	
Difference =	Total revenue lost	

Source: UBS Warburg LLC and company reports

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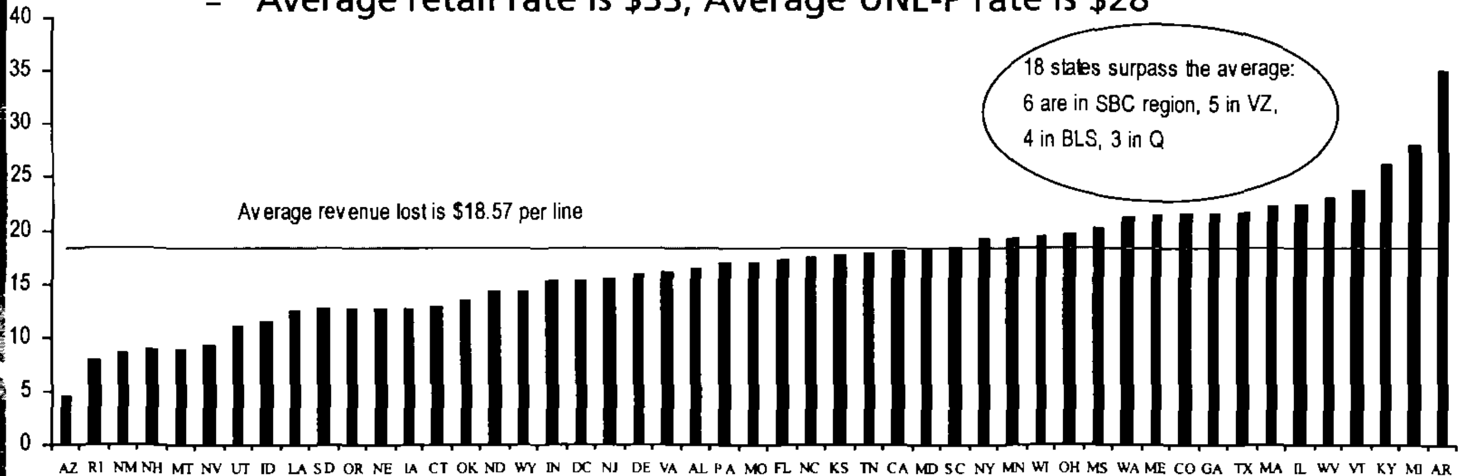
UNE-P Economics: Calculating the Impact

- **Revenue Lost Per UNE-P Line**
  - Arkansas (SBC) - $35
    - Average retail rate (including vertical services and subscriber line charges) is $51; Average UNE-P rate is $16
  - Arizona (Qwest) - $5
    - Average retail rate is $33; Average UNE-P rate is $28



Source: UBS Warburg LLC and company reports

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UNE-P Economics: Revenue Impact - SBC

	Basic Local Service	Plus: SLC	Plus: Vertical serv.	Plus: Access/IntraLATA toll	Plus: USF	Total Retail Revenue	Less: UNE-P	= Total Revenue Lost
Illinois	12.50	4.49	9.00	5.00	0.37	31.36	8.92	22.44
Indiana	12.50	5.49	9.00	5.00	0.42	32.41	17.07	15.34
Michigan	21.00	5.31	9.00	5.00	0.43	40.74	12.74	28.00
Ohio	14.25	5.35	9.00	5.00	0.42	34.02	14.41	19.61
Wisconsin	19.95	5.03	9.00	5.00	0.23	39.21	19.68	19.53
California	10.97	4.40	9.00	5.00	0.44	29.81	11.68	18.13
Connecticut	12.54	5.69	9.00	5.00	0.62	32.85	20.81	12.04
Nevada	10.75	5.26	9.00	5.00	0.54	30.55	21.17	9.38
Arkansas	31.95	5.20	9.00	5.00	0.48	51.63	16.57	35.06
Kansas	14.45	5.20	9.00	5.00	0.48	34.13	16.39	17.74
Missouri	16.90	5.20	9.00	5.00	0.48	36.58	19.37	17.21
Oklahoma	12.28	5.20	9.00	5.00	0.48	31.96	18.45	13.51
Texas	19.95	5.20	9.00	5.00	0.48	39.63	17.91	21.72
Average/Total	***14.88***	***4.93***	**9.00**	**5.00**	**0.44**	**34.25**	**14.50**	**19.76**
Avg. Ameritech	**15.65**	**5.09**	**9.00**	**5.00**	**0.39**	**35.13**	**13.40**	**21.73**

	Loop: Urban	Loop: Suburban	Loop: Rural	Local Switching: per port	Local Switching: per MOU	Tandem switching: per MOU	Shared transport: per MOU	Avg. UNE-P
Illinois	2.59	7.07	11.40	5.01	unlimited	0.0002	0.0008	8.92
Indiana	8.03	8.15	8.99	5.34	0.0034	0.0003	0.0007	17.07
Michigan	8.47	8.73	12.54	2.53	0.0012	0.0011	0.0004	12.74
Ohio	5.93	7.97	9.52	4.63	0.0032	0.0007	na	14.41
Wisconsin	10.90	10.90	10.90	4.98	0.0035	0.0007	0.0011	19.68
California	8.83	11.27	19.63	0.88	0.0008	0.0001	0.0013	11.68
Connecticut	8.95	12.03	19.69	3.31	0.0072	0.0020	na	20.81
Nevada	11.75	22.66	66.31	1.63	0.0016	0.0018	0.0073	21.17
Arkansas	11.86	13.64	23.34	1.61	0.0018	0.0017	0.0004	16.57
Kansas	11.86	13.64	23.34	1.61	0.0018	0.0008	0.0004	16.39
Missouri	12.71	20.71	33.29	2.06	0.0021	0.0008	0.0004	19.37
Oklahoma	12.14	13.65	26.25	2.32	0.0029	0.0010	na	18.45
Texas	12.14	13.65	18.98	2.90	0.0021	0.0008	0.0001	17.91
Average	**8.85**	**11.32**	**18.01**	**2.73**	**0.0018**	**0.0006**	**0.0008**	**14.50**
Avg. Ameritech	**6.37**	**8.21**	**10.79**	**4.39**	**0.0019**	**0.0006**	**0.0005**	**13.40**

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UNE-P Economics: Revenue Impact - BellSouth

	Basic Local Service	Plus: SLC	Plus: Vertical serv.	Plus: Access/IntraLATA toll	Plus: USF	Total Retail Revenue	Less: UNE-P	= Total Revenue Lost
Alabama	16.30	6.00	11.50	5.00	0.49	39.29	22.82	16.47
Florida	11.00	6.00	11.50	5.00	0.49	33.99	16.69	17.30
Georgia	17.45	6.00	11.50	5.00	0.49	40.44	18.79	21.65
Kentucky	18.40	6.00	11.50	5.00	0.49	41.39	15.12	26.27
Louisiana	12.64	6.00	11.50	5.00	0.49	35.63	23.08	12.55
Mississippi	19.01	6.00	11.50	5.00	0.49	42.00	21.77	20.23
North Carolina	13.19	6.00	11.50	5.00	0.49	36.18	18.69	17.49
South Carolina	15.03	6.00	11.50	5.00	0.49	38.02	19.43	18.59
Tennessee	12.15	6.00	11.50	5.00	0.49	35.14	17.18	17.96
Average/Total	**13.73**	**6.00**	**11.50**	**5.00**	**0.49**	**36.72**	**18.43**	**18.29**

	Loop: Urban	Loop: Suburban	Loop: Rural	Local Switching: per port	Local Switching: per MOU	Tandem switching: per MOU	Shared transport: per MOU	Avg. UNE-P
Alabama	15.24	24.75	44.85	2.07	0.0020	0.0015	0.0015	22.82
Florida	12.79	17.27	33.36	1.40	0.0008	0.0002	0.0000	16.69
Georgia	14.21	16.41	26.08	1.85	0.0016	0.0007	0.0002	18.79
Kentucky	10.56	15.34	31.11	1.49	0.0012	0.0002	0.0004	15.12
Louisiana	14.05	24.14	49.30	2.55	0.0021	0.0008	0.0047	23.08
Mississippi	15.58	20.65	29.51	2.11	0.0024	0.0008	0.0004	21.77
North Carolina	12.11	21.24	33.65	2.19	0.0017	0.0009	0.0003	18.69
South Carolina	14.94	21.39	26.72	1.65	0.0011	0.0007	0.0005	19.43
Tennessee	13.19	17.23	22.53	1.89	0.0008	0.0010	0.0001	17.18
Average	**13.26**	**18.96**	**32.77**	**1.79**	**0.0013**	**0.0006**	**0.0006**	**18.43**

UNE-P Economics: Revenue Impact - Verizon

			Plus:	Plus:	Plus:	Plus:	Total	Less:	= Total
		Basic Local Service	SLC	Vertical serv.	Access/IntraLATA toll	USF	Retail Revenue	UNE-P	Revenue Lost
VZ	Connecticut	13.43	5.69	9.00	5.00	0.62	33.74	20.81	12.93
	DC	12.78	3.87	9.00	5.00	0.57	31.22	15.87	15.35
	Delaware	11.29	6.00	9.00	5.00	0.57	31.86	16.03	15.83
	Maryland	16.81	5.69	9.00	5.00	0.57	37.07	18.82	18.25
	New Jersey	7.47	6.00	9.00	5.00	0.57	28.04	12.61	15.43
	West Virginia	29.00	6.00	9.00	5.00	0.57	49.57	26.50	23.07
	Pennsylvania	11.61	6.00	9.00	5.00	0.57	32.18	15.11	17.07
	Virginia	12.64	6.00	9.00	5.00	0.57	33.21	17.07	16.14
	Maine	16.35	6.00	9.00	5.00	0.57	36.92	15.34	21.57
	Massachusetts	16.85	6.00	9.00	5.00	0.57	37.42	15.09	22.33
	New Hampshire	13.86	6.00	9.00	5.00	0.57	34.43	25.54	8.89
	New York	11.05	6.00	9.00	5.00	0.57	31.62	12.33	19.28
	Rhode Island	14.78	6.00	9.00	5.00	0.57	35.35	27.46	7.89
	Vermont	17.20	6.00	9.00	5.00	0.57	37.77	13.85	23.92
	Average/Total	**12.47**	**5.95**	**9.00**	**5.00**	**0.57**	**32.99**	**15.10**	**17.89**

	Loop			Local Switching		Tandem switching	Shared transport	
	Urban	Suburban	Rural	per port	per MOU	per MOU	per MOU	Avg. UNE-P
Connecticut	8.95	12.03	19.69	3.31	0.0072	0.0020	na	20.81
DC	10.81	10.81	10.81	1.55	0.0030	0.0010	0.0015	15.87
Delaware	10.07	13.13	16.67	2.23	0.0028	0.0007	0.0001	16.03
Maryland	12.11	12.85	25.96	1.90	0.0038	0.0007	0.0004	18.82
New Jersey	8.12	9.59	10.92	0.73	0.0026	0.0013	0.0025	12.61
West Virginia	14.99	22.04	43.44	1.60	0.0072	0.0002	0.0007	26.50
Pennsylvania	10.25	11.00	14.00	2.67	0.0017	0.0008	0.0001	15.11
Virginia	10.74	16.45	29.40	1.30	0.0031	0.0006	0.0001	17.07
Maine	11.44	13.47	18.75	0.94	0.0017	0.0022	0.0009	15.34
Massachussetts	7.54	14.11	20.04	2.00	0.0033	0.0012	0.0022	15.09
New Hampshire	14.01	15.87	24.09	2.31	0.0079	0.0016	0.0010	25.54
New York	7.70	11.31	15.51	2.57	0.0011	na	na	12.33
Rhode Island	11.19	15.44	19.13	1.86	0.0127	0.0012	0.0022	27.46
Vermont	7.72	8.35	21.63	1.03	0.0040	0.0009	0.0006	13.85
Average	**9.34**	**12.33**	**18.16**	**1.98**	**0.0026**	**0.0007**	**0.0008**	**15.10**

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UNE-P Economics: Revenue Impact - Qwest

		Plus:	Plus:	Plus:	Plus:	Total	Less:	= Total
	Basic Local Service	SLC	Vertical serv.	Access/IntraLATA toll	USF	Retail Revenue	UNE-P	Revenue Lost
Arizona	13.18	6.00	8.00	5.00	0.56	32.74	28.10	4.64
Colorado	14.92	6.00	8.00	5.00	0.56	34.48	12.88	21.60
Idaho	14.48	6.00	8.00	5.00	0.56	34.04	22.44	11.59
Iowa	11.68	4.72	8.00	5.00	0.56	29.96	17.15	12.81
Minnesota	14.36	4.89	8.00	5.00	0.56	32.81	13.45	19.36
Montana	16.73	6.00	8.00	5.00	0.56	36.29	27.34	8.95
Nebraska	19.23	5.16	8.00	5.00	0.56	37.95	25.19	12.75
New Mexico	10.66	6.00	8.00	5.00	0.56	30.22	21.74	8.48
North Dakota	17.69	6.00	8.00	5.00	0.56	37.25	22.90	14.35
Oregon	13.80	6.00	8.00	5.00	0.56	33.36	20.66	12.70
South Dakota	16.65	6.00	8.00	5.00	0.56	36.21	23.54	12.67
Utah	11.03	6.00	8.00	5.00	0.56	30.59	19.45	11.14
Washington	12.50	5.92	8.00	5.00	0.56	31.98	10.72	21.26
Wyoming	23.10	6.00	8.00	5.00	0.56	42.66	28.26	14.40
Average/Total	**13.75**	**5.75**	**8.00**	**5.00**	**0.56**	**33.06**	**18.33**	**14.73**

	Loop			Local Switching		Tandem switching	Shared transport	
	Urban	Suburban	Rural	per port	per MOU	per MOU	per MOU	Avg. UNE-P
Arizona	18.96	34.94	56.53	1.61	0.0028	0.0014	0.0009	28.10
Colorado	5.91	12.31	32.79	1.86	0.0020	0.0020	0.0020	12.88
Idaho	15.81	24.01	40.92	1.34	0.0017	0.0032	0.0022	22.44
Iowa	13.11	15.64	27.27	1.15	0.0007	0.0042	0.0013	17.15
Minnesota	8.81	12.33	21.91	1.08	0.0018	0.0013	0.0015	13.45
Montana	23.10	23.90	27.13	1.58	0.0007	0.0068	0.0015	27.34
Nebraska	15.14	35.05	77.92	2.47	0.0007	0.0026	0.0012	25.19
New Mexico	17.75	20.30	26.23	1.38	0.0011	0.0016	0.0019	21.74
North Dakota	14.78	24.92	56.44	1.27	0.0007	0.0084	0.0044	22.90
Oregon	13.95	25.20	56.21	1.26	0.0013	0.0016	0.0000	20.66
South Dakota	17.01	18.54	24.37	1.84	0.0035	0.0017	0.0014	23.54
Utah	14.77	17.76	20.29	0.94	0.0026	0.0011	0.0009	19.45
Washington	6.41	11.35	12.76	1.34	0.0012	0.0014	0.0022	10.72
Wyoming	19.91	26.94	30.13	2.64	0.0038	0.0016	0.0003	28.26
Average	**12.17**	**19.86**	**34.72**	**1.46**	**0.0017**	**0.0020**	**0.0014**	**18.33**

UBS Warburg

UNE-P Economics: Calculating the Impact

2) Estimated Average *Retail* COGS and SG&A per Line Based on Existing Wireline EBITDA Margins

- Assumes residential wireline margins are equivalent to total wireline margins

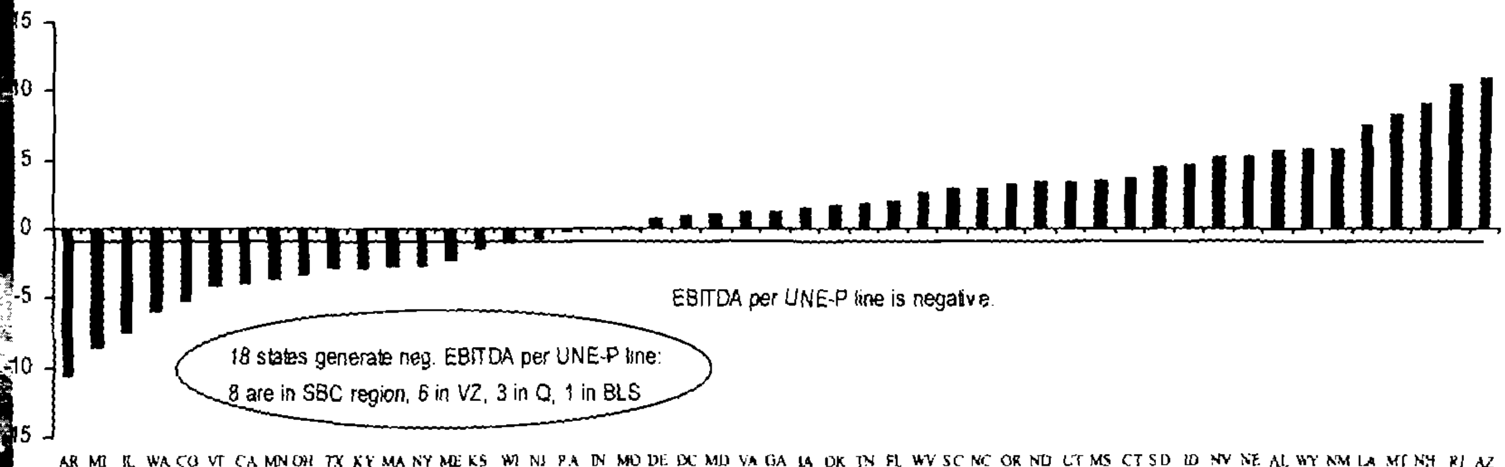
3) Calculated Wholesale EBITDA Contribution

- a) Estimated average wholesale COGS and SG&A per line
  - Assume 5% avoided cost in COGS; 20% avoided cost in SG&A
- b) Compared this cost structure to revenue from wholesale UNE-P rates

	COGS (% of sales)	S,G&A (% of sales)	EBITDA margins	% of COGS avoided	% of S,G&A avoided	Calculated EBITDA margins
SBC	35%	25%	40%	5%	20%	-24%
VZ	31%	24%	45%	5%	20%	-4%
BLS	27%	23%	50%	5%	20%	13%

UNE-P Economics: Calculating the Impact

- **EBITDA Per Line**
  - SBC - UNE-P Average ($3.51) vs. Retail Average $13.53
  - BellSouth - UNE-P Average $2.47 vs. Retail Average $18.12
  - Verizon - UNE-P Average ($0.68) vs. Retail Average $14.59
  - Qwest - UNE-P Average $1.03 vs. Retail Average $14.69



Source: UBS Warburg LLC and company reports

UBS Warburg

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UNE-P Economics: Profitability Impact - SBC

	Retail Profitability				Wholesale Profitability							
	COGS	Gross Profit	S,G&A exp.	EBITDA	COGS 95% of ret. COGS	Gross Profit	S,G&A exp. 80% of ret. S,G&A	EBITDA	EBITDA lost	EBITDA Lost/ Revenue Lost	FCF lost	FCF Lost/ Revenue Lost
Illinois	10.85	20.14	7.75	12.40	10.30	-1.39	6.20	-7.58	19.98	89.0%	13.39	60%
Indiana	11.20	20.79	8.00	12.80	10.64	6.44	6.40	0.04	12.76	83.2%	8.55	56%
Michigan	14.11	26.20	10.08	16.12	13.40	-0.67	8.06	-8.73	24.85	88.7%	16.65	59%
Ohio	11.76	21.84	8.40	13.44	11.17	3.24	6.72	-3.48	16.92	86.3%	11.34	58%
Wisconsin	13.64	25.34	9.75	15.59	12.96	6.72	7.80	-1.08	16.67	85.3%	11.17	57%
California	10.28	19.09	7.34	11.75	9.77	1.91	5.87	-3.96	15.71	86.6%	10.52	58%
Connecticut	11.28	20.95	8.06	12.89	10.72	10.09	6.45	3.64	9.25	76.8%	6.20	51%
Nevada	10.50	19.51	7.50	12.00	9.98	11.19	6.00	5.19	6.82	72.7%	4.57	49%
Arkansas	17.90	33.25	12.79	20.46	17.01	-0.44	10.23	-10.67	31.13	88.8%	20.86	59%
Kansas	11.78	21.87	8.41	13.46	11.19	5.20	6.73	-1.53	14.99	84.5%	10.04	57%
Missouri	12.64	23.47	9.03	14.44	12.00	7.36	7.22	0.14	14.30	83.1%	9.58	56%
Oklahoma	11.02	20.46	7.87	12.59	10.47	7.98	6.30	1.68	10.91	80.7%	7.31	54%
Texas	13.70	25.45	9.79	15.66	13.02	4.89	7.83	-2.94	18.60	85.6%	12.46	57%
Average/Total	**11.83**	**21.98**	**8.45**	**13.53**	**11.24**	**3.25**	**6.76**	**-3.51**	**17.04**	**85.7%**	**11.41**	**58%**
Avg. Ameritech	**12.16**	**22.58**	**8.69**	**13.90**	**11.55**	**1.85**	**6.95**	**-5.10**	**18.99**	**87.4%**	**12.73**	**59%**

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UNE-P Economics: Profitability Impact - BellSouth

	Retail Profitability				Wholesale Profitability							
	COGS	Gross Profit	S,G&A exp.	EBITDA	COGS 95% of ret. COGS	Gross Profit	S,G&A exp. 80% of ret. S,G&A	EBITDA	EBITDA lost	EBITDA Lost/ Revenue Lost	FCF lost	FCF Lost/ Revenue Lost
Alabama	10.48	28.32	8.92	19.40	9.95	12.86	7.14	5.73	13.67	83.0%	9.04	55%
Florida	9.05	24.46	7.71	16.75	8.59	8.10	6.16	1.93	14.82	85.6%	9.79	57%
Georgia	10.79	29.16	9.19	19.98	10.25	8.55	7.35	1.20	18.78	86.8%	12.41	57%
Kentucky	11.04	29.86	9.41	20.45	10.49	4.63	7.53	-2.89	23.34	88.9%	15.43	59%
Louisiana	9.49	25.65	8.08	17.57	9.01	14.06	6.47	7.60	9.97	79.4%	6.59	52%
Mississippi	11.21	30.30	9.55	20.76	10.65	11.12	7.64	3.48	17.27	85.4%	11.41	56%
North Carolina	9.64	26.05	8.21	17.85	9.15	9.54	6.57	2.97	14.87	85.1%	9.83	56%
South Carolina	10.13	27.40	8.63	18.77	9.63	9.80	6.91	2.89	15.87	85.4%	10.49	56%
Tennessee	9.36	25.29	7.97	17.33	8.89	8.29	6.38	1.91	15.41	85.8%	10.18	57%
Average/Total	**9.78**	**26.45**	**8.33**	**18.12**	**9.29**	**9.13**	**6.67**	**2.47**	**15.65**	**85.3%**	**10.34**	**57%**

UBS Warburg

UNE-P Economics: Profitability Impact - Verizon

	Retail Profitability				Wholesale Profitability							
	COGS	Gross Profit	S,G&A exp.	EBITDA	COGS 95% of ret. COGS	Gross Profit	S,G&A exp. 80% of ret. S,G&A	EBITDA	EBITDA lost	EBITDA Lost/ Revenue Lost	FCF lost	FCF Lost/ Revenue Lost
Connecticut	10.27	22.85	7 95	14 90	9 75	11.05	6 36	4.69	10 21	78.9%	6 75	52%
DC	9.50	21.15	7 36	13.79	9.03	6.84	5.88	0.96	12.84	83.6%	8 48	55%
Delaware	9.70	21.59	7.51	14.08	9.21	6.81	6 01	0.80	13.28	83.9%	8.77	55%
Maryland	11.32	25.19	8 76	16 43	10 75	8 07	7 01	1.06	15.37	84.2%	10 15	56%
New Jersey	8.52	18.95	6 59	12 36	8 09	4 52	5 27	-0.75	13.11	85.0%	8.67	56%
West Virginia	15.19	33 81	11.76	22.05	14.43	12.07	9 41	2.66	19.39	84.0%	12 81	56%
Pennsylvania	9.80	21.81	7 59	14.22	9 31	5.81	6 07	-0.26	14.49	84.9%	9.57	56%
Virginia	10.12	22.52	7.83	14.69	9.61	7.45	6.27	1 19	13.50	83.6%	8 92	55%
Maine	11.27	25.08	8 72	16.36	10.70	4 64	6 98	-2.34	18.69	86 7%	12.35	57%
Massachusetts	11.42	25.43	8 84	16 58	10 85	4.24	7 08	-2 84	19.42	87 0%	12.83	57%
New Hampshire	10.50	23 36	8 13	15 23	9.97	15.57	6.50	9.07	6.17	69.4%	4 08	46%
New York	9.62	21.42	7 45	13.97	9 14	3 19	5.96	-2.77	16.74	86.8%	11.06	57%
Rhode Island	10.78	24.00	8 35	15.65	10.24	17.22	6.68	10.54	5.11	64.8%	3 38	43%
Vermont	11.53	25.67	8.93	16.74	10 96	2.89	7.14	-4.25	20.99	87.7%	13.87	58%
Average/Total	**10.05**	**22.37**	**7.78**	**14.59**	**9.55**	**5.55**	**6.22**	**-0.68**	**15.26**	**85.3%**	**10.09**	**56%**

UBS Warburg

UNE-P Economics: Profitability Impact - Qwest

	Retail Profitability				Wholesale Profitability							
	COGS	Gross Profit	S,G&A exp.	EBITDA	COGS 95% of ret. COGS	Gross Profit	S,G&A exp. 80% of ret. S,G&A	EBITDA	EBITDA lost	EBITDA Lost/ Revenue Lost	FCF lost	FCF Lost/ Revenue Lost
Arizona	11.26	20.92	8.05	12.87	10.70	17.40	6.44	10.97	1.91	41.1%	1.05	23%
Colorado	11.87	22.05	8.48	13.57	11.28	1.60	6.78	-5.19	18.75	86.8%	10.31	48%
Idaho	11.72	21.76	8.37	13.39	11.13	11.31	6.70	4.62	8.77	75.7%	4.83	42%
Iowa	10.29	19.11	7.35	11.76	9.78	7.38	5.88	1.50	10.26	80.1%	5.64	44%
Minnesota	11.29	20.96	8.06	12.90	10.72	2.72	6.45	-3.73	16.63	85.9%	9.14	47%
Montana	12.51	23.22	8.93	14.29	11.88	15.46	7.15	8.32	5.97	66.8%	3.29	37%
Nebraska	13.08	24.30	9.35	14.95	12.43	12.76	7.48	5.29	9.67	75.8%	5.32	42%
New Mexico	10.38	19.28	7.42	11.86	9.86	11.88	5.93	5.95	5.91	69.8%	3.25	38%
North Dakota	12.84	23.85	9.17	14.68	12.20	10.70	7.34	3.36	11.31	78.8%	6.22	43%
Oregon	11.48	21.32	8.20	13.12	10.91	9.75	6.56	3.19	9.93	78.2%	5.46	43%
South Dakota	12.48	23.17	8.91	14.26	11.85	11.69	7.13	4.56	9.70	76.6%	5.33	42%
Utah	10.51	19.52	7.51	12.01	9.98	9.46	6.01	3.46	8.56	76.8%	4.71	42%
Washington	11.00	20.42	7.86	12.57	10.45	0.28	6.28	-6.01	18.57	87.4%	10.22	48%
Wyoming	14.74	27.37	10.53	16.84	14.00	14.26	8.42	5.84	11.00	76.4%	6.05	42%
Average/Total	**11.38**	**21.13**	**8.13**	**13.00**	**10.81**	**7.53**	**6.50**	**1.03**	**11.98**	**81.3%**	**6.59**	**45%**

UBS Warburg

UNE-P Economics: Calculating the Impact

- **4) Estimated Future Line Loss in Each State**
  - **SBC**: Lost 692K lines to UNE-P in 2Q, up from 358K in 1Q
    - We believe roughly half of these were in June alone
    - AT&T entered IL and OH in mid-June, CA in early August
    - We expect line loss of 1m in Q3 and 1.2m in Q4
  - **BellSouth**: Lost 278K lines to UNE-P in 2Q, up from 239K in 1Q
    - Losing 100-120/ quarter to reseller in Florida
    - AT&T in Georgia and is likely to enter Florida as well
    - We expect line loss of 300K in Q3 and 400K in Q4
  - **Verizon**: Lost 110K lines to UNE-P in 2Q, up from 64K in 1Q
    - AT&T increasing marketing expenditures in New York
    - Announced entry into New Jersey in September
    - Expect to enter Pennsylvania in 4Q
    - We expect line loss of 230K in Q3 and 500K in Q4

UNE-P Economics: UNE-P Line Projections

	1Q01	2Q01	3Q01	4Q01	1Q02	2Q02	3Q02e	4Q02e	2000	2001	2002e	2003e	2004e	2005e
Total Switched Access Lines														
SBC	61,254	60,578	60,230	59,532	59,036	58,255	57,325	56,345	61,270	59,532	56,345	54,349	53,676	53,271
VZ	62,903	62,465	61,967	61,551	61,227	60,373	58,027	57,276	62,902	61,551	57,276	55,131	54,129	53,972
BLS	25,898	25,666	25,575	25,422	25,425	25,138	24,837	24,612	25,908	25,422	24,612	24,080	23,920	23,776
Q	17,929	17,808	17,687	17,454	17,250	16,955	16,730	16,531	18,089	17,454	16,531	15,686	15,072	14,611
Total	**167,984**	**166,517**	**165,459**	**163,959**	**162,938**	**160,721**	**156,920**	**154,764**	**168,169**	**163,959**	**154,764**	**149,246**	**146,797**	**145,630**
% growth														
SBC	0.2%	-1.1%	-1.7%	-2.8%	-3.6%	-3.8%	-4.8%	-5.4%	0.9%	-2.8%	-5.4%	-3.5%	-1.2%	-0.8%
VZ	0.6%	-0.4%	-1.4%	-2.1%	-2.7%	-3.3%	-6.4%	-6.9%	1.4%	-2.1%	-6.9%	-3.7%	-1.8%	-0.3%
BLS	0.1%	-0.8%	-1.4%	-1.9%	-1.8%	-2.1%	-2.9%	-3.2%	1.6%	-1.9%	-3.2%	-2.2%	-0.7%	-0.6%
Q	0.1%	-0.8%	-1.9%	-3.5%	-3.8%	-4.8%	-5.4%	-5.3%	1.9%	-3.5%	-5.3%	-5.1%	-3.9%	3.1%
Total	**0.3%**	**-0.7%**	**-1.6%**	**-2.5%**	**-3.0%**	**-3.5%**	**-5.2%**	**-5.6%**	**1.3%**	**-2.5%**	**-5.6%**	**-3.6%**	**-1.6%**	**-0.8%**
Total UNE-P														
SBC	1,373	1,760	2,159	2,403	2,761	3,453	4,453	5,653	1,012	2,403	5,653	9,067	10,798	11,852
VZ	1,645	2,093	2,138	2,195	2,259	2,369	2,599	3,099	1,687	2,195	3,099	4,899	6,299	7,299
BLS	303	385	505	601	840	1,118	1,418	1,818	224	601	1,818	3,318	4,218	4,818
Q	431	451	459	453	491	512	547	582	na	453	582	862	1,052	1,167
Total	**3,752**	**4,689**	**5,261**	**5,652**	**6,351**	**7,452**	**9,017**	**11,152**	**2,923**	**5,652**	**11,152**	**18,146**	**22,367**	**25,136**
Net UNE-P Adds														
SBC	361	387	399	244	358	692	1,000	1,200	na	1,391	3,250	3,414	1,731	1,055
VZ	-42	448	45	57	64	110	230	500	na	508	904	1,800	1,400	1,000
BLS	79	82	120	96	239	278	300	400	na	377	1,217	1,500	900	600
Q	na	20	8	-6	38	21	35	35	na	na	129	280	190	115
Total	**398**	**937**	**572**	**391**	**699**	**1,101**	**1,565**	**2,135**	**na**	**2,276**	**5,500**	**6,994**	**4,221**	**2,770**
UNE-P Penetration														
SBC	2.2%	2.9%	3.6%	4.0%	4.7%	5.9%	7.8%	10.0%	1.7%	4.0%	10.0%	16.7%	20.1%	22.2%
VZ	2.6%	3.4%	3.5%	3.6%	3.7%	3.9%	4.5%	5.4%	2.7%	3.6%	5.4%	8.9%	11.6%	13.5%
BLS	1.2%	1.5%	2.0%	2.4%	3.3%	4.4%	5.7%	7.4%	0.9%	2.4%	7.4%	13.8%	17.6%	20.3%
Q	2.4%	2.5%	2.6%	2.6%	2.8%	3.0%	3.3%	3.5%	na	2.6%	3.5%	5.5%	7.0%	8.0%
Total	**2.2%**	**2.8%**	**3.2%**	**3.4%**	**3.9%**	**4.6%**	**5.7%**	**7.2%**	**1.7%**	**3.4%**	**7.2%**	**12.2%**	**15.2%**	**17.3%**

UBS Warburg

UNE-P Economics: What's the Call?

- **Downgrading the Bells (BLS, SBC and VZ)**
  - Expect the group to perform inline with the market over the next 12 months
  - Dividend yields should provide a backstop on valuations
- **Economics of UNE-P worse than expected for the Bells**
  - Will put additional pressure on Bell margins and earnings
  - SBC and BellSouth are the most exposed
- **Line Losses Will Likely Accelerate in 2H02**
  - AT&T and MCI
  - No near-term regulatory relief expected
- **Long Distance is Only a Partial Offset**
  - Local revenue is much higher margin than long distance
  - To breakeven on the EBITDA line, Bells need to add 5.4 long distance customers for every UNE-P line added
- **2003 EPS Estimates are Too High**
  - We now expect 2003 EPS to decline 1.8%; the Street still forecasts growth

Additional information available upon request.
Prices of companies mentioned as of :

AT&T Corp	2	T	N/A
BellSouth Corp	2	BLS	N/A
Qwest Communications International		Q	N/A
SBC Communications, Inc.	2	SBC	N/A
Sprint FON Group	2	FON	N/A
Verizon Communications	2,57	VZ	N/A
WorldCom Group	1,2	WCOM	N/A

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DRESDNER

United States
Telecom Services

21 August 2002

Dresdner Kleinwort Wasserstein Research

UNe-P: the Un-Profit

Regulation pressuring RBOC profits

Industry update

RBOCs' core profit center is under severe attack from competitive forces. Regulators have reduced UNE pricing such that CLECs are using UNE lines to penetrate the residential and small business markets. In our view, until UNE pricing becomes more rational, the RBOCs will suffer steeper profitability squeezes from CLECs using UNE lines.

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- **CLEC penetration rising:** By the end of 2001, according to the FCC, CLECs accounted for 10.2% of the nation's 192m switched lines, up from 7.7% 12 months earlier, a 32% increase in market share. Cable telephony lines are increasing at a slightly faster rate than overall CLEC lines. By the end of 2001, according to the FCC, cable telephone lines constituted 11% of CLEC lines (2.2m lines), and 1% of all switched lines.
- **Lost ILEC profits:** ILECs lost 1.5m lines in the last six months of 2001 in the form of UNEs (unbundled network elements) to CLECs, which we estimate comes to $1bn in lost annualized sales, most of which is pure profit. In a six-month span, then, after taxes, ILEC bottom lines lost about $325m in net income, and $4.2bn in market capitalization, assuming a 13x P/E multiple. The Bells control about 94% of the nation's incumbent access lines, so the RBOCs, primarily through UNE, lost $4bn in market capitalization in the last half of 2001. The Bells currently have a $220bn equity market cap, meaning that CLECs conceivably destroyed 2% of Bell equity value in the H2 2001.
- **Some CLEC overbuilding:** In H2 01, CLECs gained 2.4m lines, which we believe was created exclusively at the expense of the ILECs, or 19,000 lines per business day. Some of these lines are lost to cable telephony or where CLECs build their own connections directly to businesses. In such cases, the CLEC has overbuilt, or completely severed the connection between the ILEC and the customer, removing the ILEC from 100% of their former revenue stream.
- **Ratings:** We maintain our Hold ratings on BellSouth Corp., Qwest Communications, SBC Communications and Verizon Communications.

Dresdner Kleinwort Wasserstein

Investment summary and conclusion

Regulators are forcing unprofitable resale pricing upon the local industry through UNEs

The concern isn't the CLECs; with a weak capital market, and the techno bubble-burst, the money CLECs need to build out a local network IS NOT available in the public or bank markets. Ironically, the impact of CLEC competition has never been more NEGATIVE for RBOCs (we interchange the terms RBOCs and ILECs). Why? Because the regulators are forcing unprofitable resale pricing upon the local industry through Unbundled Network Elements, or UNEs. What are UNEs?

UNEs are network 'elements' – switching, copper lines, data base hookups, fiber trunks into office buildings, etc., that the RBOC is forced to lease to the CLEC. When a CLEC uses UNEs INSTEAD of building out its own copper loops, switches, etc., it avoids major capital expense, and 'rides' the RBOCs' investments made over decades. When capital flowed freely to CLECs in the 1990s, CLECs took that money *and decided to build their own networks. At the time that seemed to be a rational* decision: money would be available from Wall Street 'forever', and an owned network would be more profitable than a leased one – eventually. Unfortunately for those CLECs that overbuilt over wide geographic territories, i.e., the "XOs" of the world that decided there was a business case for a 'national – local' infrastructure that served (in retrospect) way too many cities, thereby never achieving density – the key to local profitability – the capital markets dried up. Left, were the liquid competitors to the Bells; AT&T and MCI (until now), who, over the last two years, have taken up UNE, or leasing, rather than constructing a second local network, as the means to compete. WHY?

AT&T and MCI are very concerned about losing long distance customers to the RBOCs. So even if UNE isn't as profitable as owning your own network, by being able to offer local service promptly (which UNE enables) and at a decent profit (which UNE enables), the long distance carriers can combat long distance customer defection, making THEIR foray into leasing local services more profitable by avoiding lost long distance revenues, than an "XO" could have.

- Hence, the recent rapid entry into long distance by the RBOCs has been accompanied by a rapid expansion of the use of UNEs by CLECs, principally AT&T and MCI.
- States rule over the Feds on local telephony. States have been widening the UNE discount – to the detriment of the RBOCs – as a quid pro quo to RBOC long distance entry. Local profit margins are much fatter (45%) than long distance margins (25%), so the current trade-off is a loser for the RBOCs.

- The discount has caused much more rapid CLEC UNE use. This was seen most recently in California, where the CA PUC has recently ruled that SBC can provide long distance (SBC still must apply at the FCC). In the case of CA, AT&T got lower UNE rates BEFORE SBC was able to get into long distance, causing a timing-engendered loss as well.

Which regulators? Well, first the FCC, which took the 1996 Act that did not specify particular UNEs or what price they should be made available at. The last FCC made a long list of UNEs and set severe discount 'frameworks' to those UNEs. Then the states got into the act by setting the actual UNE rate, i.e., the discount from retail rates offered to an RBOC's customers. These discounts can be as high as 65%! At the margin, such revenue loss, accompanied by continued network costs, results in almost one-for-one profit loss – **thus, the UNE is highly profit-destructive**.

The regulators may allow three to four vertically and horizontally integrated providers

The only saving grace is that MCI has serious financial difficulties, and could be forced to abandon its UNE expansion program – to the Bells' benefit. In addition, AT&T, which is in much better financial shape, and can, we estimate, survive on its own for years, could be bought out by a Bell if the current telecom meltdown continues. In other words, the regulators – the FCC and DOJ – may allow the oligopolization of the telecom industry, where there are three to four vertically and horizontally integrated providers. That is, three to four old Ma Bells.

- For investors, we believe that the Bells are trading near historically low multiples of EBITDA, which is the most important barometer of value, in our view. However, UNE is, at the margin, so value destructive, that we would be HOLDERs, if and until the regulators become more realistic. And if they don't, shareholders might be rewarded by a severe downsizing of MCI and/or absorption of AT&T by a Bell. **Conclusion: Hold.**

"The cream skim" – business, population density and demographics

The current competitive policies favor rich residential customers, large businesses and states with greater population density.

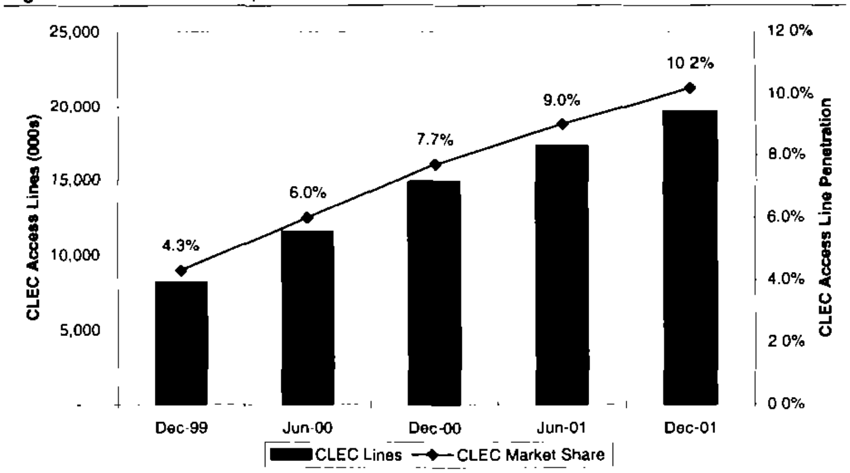
45% of CLEC lines served residential and small business markets

According to the FCC, 55% of CLEC lines served medium and large businesses and government customers. In contrast, just 23% of ILEC lines served such customers. **Conversely, 45% of CLEC lines served residential and small business markets, while over 75% of Bell lines served lower profit residential and small business lines.** Businesses and government offices are more densely packed, and spend more per access line than residents.

Thus, the ILECs are left holding the 'bag' – serving more of the costly (read: geographically dispersed) and lower paying line base. We view the 'cream skim' as one of the most compelling arguments that local competition regulation is destructive and illogical.

Year-end 2001E CLEC line composition

Figure 1: CLEC access lines, 1999-2001



23 July 2002

Source: FCC

Overbuild: 33%, but in key sectors much lower

The goal of the 1996 Act was to create the environment for local competition, not create local *competition*

Of the 33% overbuild percentage, we estimate that under 5% of residential lines are overbuilt lines. We believe this is a *telling* statistic and perhaps the most important in this report. In the US at year-end 2001, there were 134m residential and small business access lines. The majority of overbuilt lines are business lines, with a concentration on medium and large sized businesses. Our view is that the current rules forcing RBOCs to resell local lines to CLECs at very deep discounts are off course. **The goal of the 1996 Act was to create the environment for local competition, not create local competition.** Although seemingly subtle, this is a huge distinction. The idea is that to produce new, exciting services and pricing programs requires a competitor to provide new, exciting services. How can that occur if the CLEC is reselling the RBOCs' service? With only a 33% overbuilding rate, the desired outcome of the Act is unaccomplished. The idea was to give the CLECs a means to build customer scale upon which they could then justify building their own network, since this is an industry of scale. In point of fact, the growth in UNE lines is accelerating, despite the fact that the base of CLEC customers is also expanding. With UNE, the CLECs are merely behaving as rational decision makers. If it's cheaper and less risky to resell rather than build, then resell is the answer. Unlike the long distance industry, which is less of a natural monopoly since it takes just severalbn dollars and two to three years to build a national network, except for the cream of the business market and the cream, i.e., demographically desirable (read: rich homeowners who can buy many services) residential market, a new national local network is unlikely to emerge. We won't get into "what ifs," but under a more rational local competitive framework, overbuilding might have occurred to a greater extent.

Sinking the sunk costs

Cable telephony penetration is increasing even faster than overall CLEC penetration

Overbuilding erases any revenue contribution from former customers or prospective customers that would have used a Bell if an overbuilding CLEC wasn't around. It fully 'strands' the lines' assets. The business base is easier to overbuild because they are located in office buildings and otherwise packed more densely. So the 'cream skim' has been accompanied by the 'overbuild.' That is, for years, CLECs such as Time Warner Communications, AT&T Business and WorldCom's MFS (although we believe one of WCOM's downfall was its inability to leverage the MCI long distance base and 'backsell' an MFS local product into it) have been building their own trunks into business locations, either fully bypassing the ILEC, or perhaps renting minimal network subsegments such as the last link into a building. Now, cable telephony is copying the CLECs on the residential side. By piggybacking onto the cable television network, they found an economical way to overbuild the less dense residential base, a danger to the Bells that have concerned us for some time. FCC statistics show cable telephony penetration increasing even faster than overall CLEC penetration, and AT&T Broadband reported in Q2 02 that, for the first time, its cable telephony operations are EBITDA-positive, validation that a means to 'crack' the natural monopoly in the local residential market exists. It still takes a lot longer to deploy a cable telephony line than a UNE line. Thus, cable telephony is probably impacting residential lines' margins, but not taking significant market share yet.

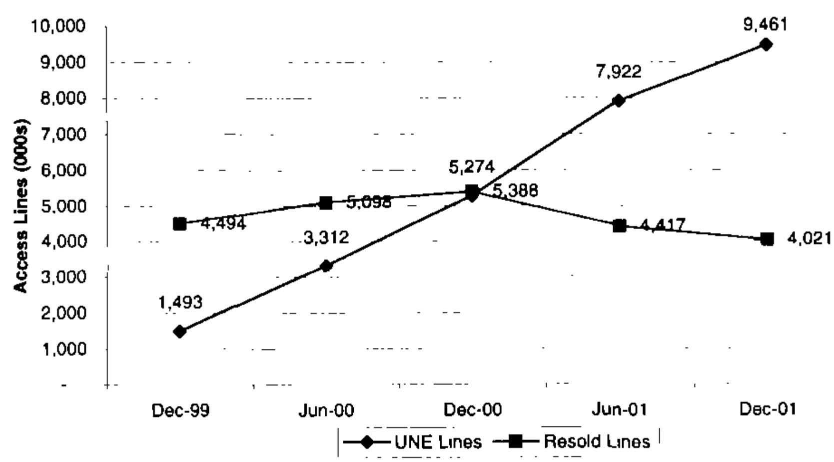
The bottom line is that competition comes in two flavors: reselling the RBOCs' network, or overbuilding. The Bells argue that low UNE rates, which can force an RBOC to resell a local line to a CLEC such as MCI "Neighborhood" for as much as 70% off of retail, aren't so bad because they at least provide some revenue across a high fixed cost structure. Also, since the line is deployed already (**sunk cost**), and only minimal cash is required to operate that line, an RBOC would select UNE to overbuilding as the lesser of two evils. We agree. However, with overbuilding now taking place in the business and residential ends of the local market, we expect that the value of the RBOCs' plant, i.e., their sunk costs, are falling, **and that plant write downs loom.** Again, the overbuilding is concentrating in the large business arenas and will occur for plant that serves large businesses, not the residential market.

Resale: 22%, down from 43% two years earlier

UNE-P lines add 20%-40% points of gross margin to a CLEC

Resale is uneconomical for CLECs, so they are dropping resale lines or changing them to a UNE-P "lines" regime, which are functionally equivalent, but add 20%-40% points of gross margin to a CLEC.

Figure 2: UNE vs. resold lines, 1999-2001



As of 23 July 2002

Source: FCC

UNE: 47% (24% at YE 1999) – erased 2% of bell equity?

UNE-P has made it possible for AT&T and MCI to compete in the residential arena

The UNE platform is growing rapidly in use. To the CLEC the only difference between reselling and UNEs is the cost. In fact, UNE is nothing more than resale with 2-3x the discount, which comes to a 35%-60% discount. UNE-P has made it possible for AT&T and MCI to compete in the residential arena. Because it is too costly to build out less dense residential networks, UNE-P resale (and cable telephony overbuilding) are being used to penetrate the residential and small business market. According to the FCC, CLECs served 4.6% of those markets at the end of 2000, and 6.6% of such markets by year-end 2001. There were 9.5m UNE loops at year-end 2001, **up from 8m six months earlier**. About 61%, or 5.8m lines, were UNE-P lines that included switching, and the rest (3.7m) were UNE loops, where the CLEC just leases the copper loop, and provides the other network elements. UNE-Loops cause the largest revenue loss under the local wholesale scheme. However, UNE loop sales should ameliorate, in our view.

ILECs lost 1.5m lines in the last six months of 2001 in the form of UNEs to CLECs, which we estimate comes to $1bn in lost annualized sales, most of which is pure profit. In a six-month span, then, after taxes, ILEC bottom lines lost about $325m in net income, and $4.2bn in market capitalization, assuming a 13x P/E multiple. The Bells control about 94% of the nation's incumbent access lines, so the RBOCs, primarily through UNE, lost $4bn in market capitalization in the last half of 2001. The Bells currently have a $220bn equity market cap, meaning that CLECs conceivably destroyed 2% of Bell equity value in the second half of 2001, assuming our estimates are reasonable and that the market actually "made" this observation and factored it into stock prices. There's no assurance RBOC stocks didn't decline due to other reasons, and that the UNE-P issue has yet to be factored into the stocks.

Case study: AT&T UNEs

The UNE-P platform will be instrumental in enabling AT&T to reach its goal of $10bn in annual business local revenues in five years

AT&T's new senior management states that the UNE-P platform is expected to be as successful in penetrating the business market as it has been in the residential market. Today, T has some 3.2m local lines, of which 500,000, or 15%, are UNE-P-based. *That percentage will increase. We estimate that the UNE-P platform will be* instrumental in enabling AT&T to reach its goal of $10bn in annual business local revenues in five years. Note: it takes T about two years for UNE-P, on its own, to breakeven, excluding the positive impacts of bundling long distance with UNE-P.

From a macroeconomic point of view there are several concerns with the UNE-P system:

- It's a policy-stimulated transfer of wealth (from shareholders and employees to consumers), rather than being left to market forces.
- In the longer-term, it could rob consumers of advanced services that require the RBOCs' plentiful cash flow to fund.
- Asset write-downs will cause 'stock-shock' and a shock to the telecom 'supplier' system.

UNE is a creation of the prior FCC administration. Only network elements such as switching, local loop costs and other various network elements were required under the 1996 Act to be sold at reasonable discounts to the CLEC. The FCC decided that *the ILECs were required to "rebundle" these elements and sell them at much steeper* discounts than plain resale. Plain resale was required by the Act as well. The price was to be the retail price charged by the Bell less avoidable costs such as selling costs. That was interpreted to mean a 20%-25% discount to retail. However, the CLECs didn't have any margin left over for a profit. We're not sure, however, that profit was required by the Act. At the end of the day, the spirit of the Act was to deliver a mechanism to jumpstart local competition, and we interpret that to mean to develop a mechanism to allow competitors to build up a large enough base of customers – either through UNE elements or resale to THEN justify building their own network.

Regulators forgot to notice that wireless is local competition, too

In its July 2002 Local Telephone Competition report, the FCC reported that US wireless subscribers increased from 79.7m at year-end 1999 to 122.4m by year-end 2001, or a 23.9% CAGR. With wireless carriers offering big bucket minute plans including features like Caller ID and free roaming, wireless phones are replacing landlines for many consumers. As wireless companies continue to build out their networks and improve service quality, wireless displacement will increasingly displace RBOC landlines.

Wireless displacement is not only affecting primary access lines, but is having a devastating effect on RBOC second lines

Wireless displacement is not only affecting primary access lines, but is having a devastating effect on RBOC second lines. Second line growth for the RBOCs is declining rapidly, primarily as a result of wireless displacement of these second lines. For example, BLS reported a Q2 02 second line YoY growth decline of 10.6%, while SBC's second lines declined 8.7% YoY in Q2 02. Historically, second lines have increased as much as 15%-20% YoY, and just two quarters ago we estimate that these second line were declining approximately 5%. If we estimate that the RBOCs combined for 17m second lines at year-end 2001, and each second line generates $5 per month with a 65% EBITDA margin, then $633m of EBITDA was generated from RBOC second lines in 2001. This $633m of EBITDA is in danger of being reduced by 10% per year, primarily due to wireless displacement.

End result

$1.4bn decline over last year

Figure 3: RBOC local wireline

Revenues ($000s)	Q1 01	Q2 01	Q3 01	Q4 01	Q1 02	Q2 02
VZ	10,920	10,953	10,666	10,539	10,474	10,468
YoY growth	2.9%	0.3%	-1 9%	-3.6%	-4.1%	-4.4%
SBC	10,113	10,334	10,201	10,043	9,781	9,737
YoY growth	5.0%	3.6%	1.0%	-1.5%	-3.3%	-5.8%
BLS	4,612	4,722	4,733	4,757	4,614	4,586
YoY growth	3.0%	3.6%	4.6%	4.4%	0 0%	-2.9%
Q	3,577	3,620	3,637	3,706	3,468	3,434
YoY growth	na	na	na	na	-3.0%	-5 1%
Total	29,222	29,629	29,237	29,045	28,337	28,225
YoY growth	3.7%	2.2%	0.4%	-1 3%	-3.0%	-4 7%

Source Verizon, SBC Communications, Qwest, BellSouth

Regulators hurting consumers in long run

Regulators have moved to an active stance to redesign the industry

The combination of very effective lobbying on the part of small and large (read: AT&T) CLECs, and a democratic FCC (thought to be friendly to long distance and CLECs, not RBOCs) prodded the FCC to create the UNE-Platform, or UNE-P. The FCC decided that UNEs should be priced at a theoretical level, that is, what would it cost for a brand new local network to add an access line. The assumptions include state-of-the-art networks throughout, and perfect capital and man-hour deployments. In other words, we believe these are imaginary, non-historic; therefore, in our opinion, this is an unreasonable way to regulate an industry. Another related issue is that of regulation altogether. In the 10 years of covering this industry, regulators have, in our view, taken an exponentially more involved role in the "day-to-day" decisions about pricing, mergers, service offerings, inter-carrier relationships, etc. than *before* the 1996 Act. It wasn't supposed to turn out that way. Regulators have moved to an active stance to redesign the industry, from a passive stance where carriers knew the rules and operated *freely* within them. They knew what their returns would be, and didn't have to make the very risky types of investments RBOCs have made in the past few years to compensate for the loss of growth in the core business that has destroyed shareholder value. On top of that the regulators have had the nerve to regulate the newer high-risk capital return projects such as DSL. Now every carrier move is scrutinized by a state or FCC hearing, slowing down the communications revolution of the late 1990s. In the short run, the consumer wins with these artificially lowered local rates. In the long term, the consumer will suffer as ILECs cut their capital budgets by 30%, which will produce fewer services, more network outages, and crummier customer service. The regulators don't understand that the local industry, unlike the long distance industry, is the closest thing in telecoms to a "natural" monopoly. Wireless, long distance and undersea networks cost less per DS-0 to build, and are constructed in a matter of months or a year or two, not the many years it takes to build a local landline network.

Figure 4: Dresdner Kleinwort Wasserstein RBOCs earnings universe

			Price	Target		52-week (US$)		Earnings per share (US$)			Qtrly. EPS (US$)		P/E ratio (x)			Est. 5-yr	Ind		Mkt
			(US$)	price	Fiscal											gr. rate	div	Yield	cap.
Rating	Company	Symbol	20 Aug.	(US$)	year	High	Low	2001A	2002E	2003E	Yr. ago	Curr. est.	2001A	2002E	2003E	(%)	(US$)	(%)	(US$m)
Hold	BellSouth Corp.	BLS	$25.50	$28 00	Dec	$42.95	$20 10	$2.21	$2.15	$2.23	$0.59	$0.53	11.5x	11.9x	11.4x	NA	$0.80	3.1%	$46,076
Hold	Qwest Communications	Q	$2.95	$2 00	Dec	$24.00	$1.07	$0.05	-$0 52	-$0.40	-$0.08	-$0.15	59.0x	NM	NM	NA	$1.54	52.2%	$4,628
Hold	SBC Communications (1)	SBC	$27.66	$28.00	Dec	$47.50	$22.20	$2.35	$2.31	$2 41	$0.59	$0.55	11.8x	12.0x	11.5x	NA	$1.08	3.9%	$88,949
Hold	Verizon Communications (1)	VZ	$31.80	$38.00	Dec	$55.99	$26.01	$3.00	$3.06	$3.15	$0.75	$0.78	10.6x	10.4x	10.1x	NA	$1.54	4 8%	$80,874

(1) Mr Roberts has a long position in the common shares of this security

Source First Call, Reuters, DrKW estimates

Notes

Mr. Roberts has a long position in the common shares of SBC Communications and Verizon Communications.

DrKW is a full service firm that offers many services and products to a wide variety of clients. The reader should assume that DrKW has received or may receive compensation for those services with respect to any of the companies mentioned herein.

This report has been prepared by Dresdner Kleinwort Wasserstein, by the specific legal entity named on the cover or inside cover page

The views expressed in this research report accurately reflect the research analyst's/analysts' own views about the securities and companies mentioned in this report

DRESDNER KLEINWORT WASSERSTEIN RESEARCH – RECOMMENDATION DEFINITION

(Except as otherwise noted, expected performance over next 12 months)

Buy	10% or greater increase in share price	Reduce	5-10% decrease in share price
Add	5-10% increase in share price	Sell	10% or more decrease in share price
Hold	+5%/-5% variation in share price		

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COMMERCE CAPITAL

Telecommunications & Broadband Services

THE STATUS OF 271 AND UNE-PLATFORM IN THE REGIONAL BELLS' TERRITORIES

Regulatory Update

Type of Report
INDUSTRY REPORT

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- Since our May report, the FCC has granted 271s in four states: Georgia and Louisiana for BellSouth and Maine and New Jersey for Verizon. Applications for seventeen states' 271s are before the FCC now. By year-end we expect all of Verizon to be covered by 271s. We expect Qwest to have 271s in all but one or two states (Minnesota and Arizona being the ones we expect to lag). We expect BellSouth to have all its 271s except Florida. Finally, we expect SBC to add California late in 2002, but do not believe the Ameritech states will get their 271s until the first half of 2003.

- As part of the 271 process, UNE rates since May have been reduced in many states, most notably in the Qwest Region, but also in SBC and BellSouth states. We expect some more UNE reductions (Massachusetts, New Jersey and Pennsylvania are pending for Verizon, for example) but expect the pace to slow given how much UNE rates have decreased and given that the 271 process that drives some of the cuts is nearing its end.

- For the CLECs, the lower UNE rates present the opportunity to enter the local market with minimal up-front investment. It is not clear, however, whether some of the more troubled companies, like WorldCom, will be able to take full advantage. We view UNEP as being positive for the IXCs, particularly AT&T, but do not believe that it is enough to stem the declining revenues and profitability of the consumer long-distance market.

- From the RBOC-investor's perspective, UNEP presents several problems. One is the reduction in revenues that comes from converting retail to wholesale revenues. The other is the pricing compression that comes from the RBOCs' own attempts to restructure their prices to compete with the new entrants. Finally, there is the exposure during a period when an RBOC cannot yet enter long-distance, but the IXCs have begun to enter its local market. Among the RBOCs, SBC is by far the most exposed. In California and in the Ameritech states, it has super-low UNEP prices and no ability to counter an IXC's entry with an all-distance plan. It is possible that Verizon will also see some meaningful share loss in the next few months, but we do not see the IXCs being as focused on it as they are on SBC, particularly in California.

TABLE OF CONTENTS

INDEX OF EXHIBITS

Ratings

Strong Buy	*Market Outperform*	*Market Perform*	*Market Underperform*
Outperform market near-term and long-term by over 10%	Outperform market long-term by over 10%	Perform in-line with market (+ or – 5%)	Underperform market by over 10%

THE STATUS OF 271 AND UNE-PLATFORM IN THE REGIONAL BELLS' TERRITORIES

Over three months have passed since we last published our report "The Status of 271 and UNE-Platform in the Regional Bells' Territories". Given the recent flood of 271 filings with the FCC and the concomitant changes to UNE-Platform (UNEP) rates made by individual state commissions, we thought it timely to provide an update.

- The flood of applications for in-Region long distance entry under section 271 of the Telecom Act (271) is reaching its crest. Fourteen 271s have been granted to the Regional Bells (RBOCs) so far, and the FCC has applications for seventeen more before it right now: Alabama, Kentucky, Mississippi, North Carolina and South Carolina for BellSouth; Colorado, Idaho, Iowa, Nebraska, North Dakota, Montana, Utah, Washington, and Wyoming for Qwest; New Hampshire, Delaware, and Virginia for Verizon.

- By year-end 2002, we expect 271s to cover all BellSouth states except Florida, all Qwest states except Minnesota and possibly Arizona, and all Verizon states. SBC has a good chance of having California granted by year-end, and a slight chance of having Michigan granted as well, with the rest of the Ameritech states likely to slip into the first half of 2003.

- As the RBOCs have prepared to submit their 271s, they and their state commissions have made changes to their unbundled network element (UNE) prices. While commissions do occasionally change UNE prices independently of the 271 process—as New York did earlier this year and as Massachusetts, New Jersey, Texas and Pennsylvania are doing now—most changes have been made as part of the 271 process. Thus, both because UNE rates have been lowered sharply in most states over the last year and because the 271 process is ending, we expect a slower rate of change to UNE prices over the next year or two than we have seen in the last few months.

- The actual implementation of UNEP accelerated in the last few months, as competitive carriers (CLECs) have focused more on this market. WorldCom's MCI division, in partnership with Z-Tel launched its Neighborhood Plan in April. AT&T has added local UNEP-based service in six states to its original two since March of 2002 and will probably add another two states this year. In early 2002, AT&T was offering UNEP-based local service only in New York and Texas. Since March, it has added Michigan, Georgia, Illinois, Ohio, California, and New Jersey. It has indicated that it will also enter Pennsylvania and Massachusetts this year. We expect it to push hard in California, where it will fight hardest to protect its long-distance market. WorldCom's MCI division introduced its Neighborhood plan in April and appeared ready to pursue entry in at least the urban zones throughout most of the country. Entry by these long-distance carriers (IXCs) has been partly in response to potential entry by the RBOCs into the long distance market in a given state and partly in response to lower UNE prices. Given the financial problems at WorldCom and the changes in AT&T's structure and management as it merges its Broadband unit with Comcast it is somewhat difficult to predict how hard they will push UNEP. We expect some backing off on WorldCom's part, and a harder push in a small number of states on AT&T's.

- *At least in theory, the greatest exposure to changes in UNE prices is to SBC.* AT&T just began deploying UNEP in California, where SBC will not be able to respond on the long-distance side till around year-end 2002, at best. AT&T is also in Michigan, Illinois, and Ohio, where it is unlikely that SBC will be able to respond on the long-distance side till sometime in the first half of 2003. As we indicate below, UNEP discounts are greatest overall in the SBC Region. BellSouth is seeing UNEP-based entry primarily in Georgia and Florida, but AT&T has not yet entered Florida. Florida is the only state in which we do not expect BellSouth to have a 271 till late first quarter 2003. Qwest's rates have recently dropped in a number of states, so that the Regional average UNEP rate has dropped from $28.21 to $23.97. However, we do not believe that entry into Qwest's territory is a high priority for the IXCs at any price. Verizon's rate at $20.23 is the second lowest on a Regional basis, but that rate is relatively stable vs. May of 2002. It is also worth noting that Verizon has not lost much market share since rates in New York were lowered in January. AT&T has indicated that it will enter Pennsylvania and Massachusetts this year, but neither the timing nor the level of effort in those states is clear to us.

- The Supreme Court has affirmed the FCC's right to designate TELRIC (Total *Element Long Run Incremental Cost) as the methodology by which UNE* prices are set. More broadly, in its May 2002 Verizon Communications v. FCC decision, the Supreme Court appeared to affirm the FCC's right to designate any method other than rate-of-return, which is specifically precluded by the Telecom Act, for the purpose of setting UNE prices.

- The long-term survival of UNEP is, nevertheless, in question. In its May 2002 Verizon decision, the Supreme Court reaffirmed the "necessary and impair" standard, which it had already highlighted in its January 1999 Iowa Utilities Board v. FCC decision. On May 24th, in its USTA v. FCC decision, the D.C. Circuit of Appeals remanded to the FCC the 1999 UNE order in which the FCC attempted to refine the list of required UNEs in accordance with the Supreme Court's "necessary and impair" standard. The D.C. Circuit also vacated the FCC's line-sharing order. The FCC has appealed back to the full D.C. Circuit some aspects of the court's decision.

- *All of these judicial decisions will have an impact on the triennial review* which was initiated by the FCC in December of 2001 to decide which UNEs still meet the "necessary and impair" test. The triennial review was expected to conclude this year. If the D.C. Circuit does accept the FCC's appeal, we believe it is unlikely that the FCC will issue an order in the triennial review till after the court rules, most likely some time next spring. Aside from delaying the conclusion, the various court decisions are likely to drive the FCC toward a more granular analysis than it had done in the past. That was the bent of the current FCC anyway, but the D.C. decision reinforces it. For example, we would not be surprised to see switching removed as an element in some markets fairly quickly and in others over some longer transition period. Other elements also might be removed over time in some geographic and customer markets. If the FCC decides to take granularity down to the wire-center level, it may leave actual implementation in the hands of the states, but with fairly tight rules to guide that implementation. In the context of UNEP, what is significant about the removal of an individual element is that it makes it necessary for the CLEC to do some work to reassemble the line when it inserts its own equipment. That will make it more difficult to move large numbers of customers rapidly. Thus, the timing and outcome of the triennial review is very important both to the CLECs/IXCs who use UNEP and to the RBOCs who are wholesaling lines to those CLECs/IXCs at deep discounts.

- The actual financial impact of UNEP on either the RBOCs or their competitors is, of course, what investors care about. Unfortunately, it is difficult to quantify because it depends so much on the companies' strategies. The more CLECs are able to cream-skim in a given market, the better their own margins and the greater the damage to the RBOC. The CLECs' ability to cream-skim, in turn, depends not only on the CLECs' own strategies, but on the RBOCs' win-back efforts, which often include the introduction of new pricing plans and the RBOCs' ability to offer all-distance plans. Thus, damage to the RBOCs' financials comes not only from the conversion of retail revenues to wholesale revenues, but from a broader repricing in response to competition. The offset from long distance appears to be fairly minor, at this point. Although ultimately all-distance customers may be "stickier" than those who use only one service, initially both sides are likely to spend more on marketing to fight churn than they did before.

- Our May 1, 2002 report included one effort at such an analysis. It found that UNEP creates a discount of about 19% to 42% below retail residential revenue. Using the same retail rates, those discounts would now range from 24% to 50%. Another way to look at the issue is to use the FCC's rate reference book, which relies, in turn, on TNS bill-harvesting data. According to this data, average residential spending per household on local service is $426 per year and on long-distance $176 per year. Assuming 1.2 lines per household, that would equate to about $30 per line in local revenue plus about $4 per line in access charges for a total revenue per line of about $33-$34. That figure falls within the range of $30-$34 for retail consumer revenue that we had estimated in May, although both calculations present potential problems. For the TNS data, specifically, it is not clear whether taxes and Universal Service Fund contributions which an RBOC would simply pass through to the government are included in the revenue. With that caveat, we are using $33.50 as a national average residential rate. That leads to UNEP discounts on a Region-wide basis of 27% in BellSouth, 28% in Qwest, 48% in SBC, and 40% in Verizon. The TNS numbers also indicate that the RBOC would need to gain more than three long-distance customers to make up for the revenues from any local customer it loses ($474 of local plus access revenue vs. $128 of long-distance revenue net of access). And—given the different margin structures of the industries—it needs more than that to make up for the lost cash flow. Of course, to the extent that an IXC can capture small business customers whose *retail spending is higher than that of consumers, the damage to the RBOC is* greater. For some time, at least, while the industry restructures itself into an "all distance" market, the UNEP vs. 271 game is likely to be "negative-sum," with both the RBOCs' and IXCs' profits hurt by lower revenue and higher marketing costs.

APPENDIX

SUMMARY OF CHANGES TO UNEP REPORT, MAY TO AUGUST, 2002

Changes in methodology and corrections of errors:

- We changed our MOU (minutes of use) assumption from 1200 to 1411, to account for toll minutes, based on footnote 252 of the FCC's Pennsylvania order.

- For the columns that calculate full UNEP based on DEM (dial-equipment minutes), there is no change. Thus, for comparison, we are showing full UNEP based on DEM for both May and August in our tables.

- We corrected an error in the formula that calculated amortized non-recurring charges for Verizon's MA, NH, NY, DE, PA. For NV, KS, MO, OK and TX, we now have some non-recurring charges that we did not have in our last iteration. For Maryland, we are no longer using the compliance rates that we used in May. Statewide loop rate averages changed in several BellSouth, Qwest and Verizon states, though the actual rates did not, based on new estimates of the distributions of lines per zone: KY, LA, MS, SC, NM, ME, RI, PA.

- Once we assemble our data, we ask all the relevant state commissions, RBOCs and the two major IXCs to comment on its accuracy. We received specific feedback on the accuracy of our tables from all the RBOCs and many states.

SUMMARY OF RBOC CHANGES

- UNE prices continue to trend down.

- For all RBOCs the full UNEP average (assuming DEM) dropped by 10% from that which we reported in May.

- On a national basis, full UNEP average (assuming DEM) now stands at $20.28 vs. the $22.58 average we reported in May.

- The range is a high of $24.38 for BellSouth and a low of $17.50 for SBC, within the range we predicted in our May report.

- SBC experienced a roughly 20% decline (with an even sharper decline in California) and Qwest experienced a roughly 15% decline in full UNEP (DEM) average since our May report.

- The RBOC-wide total switching and transport average dropped 21%, from the $8.34 we reported in May to $6.59 in August.

- Several states' full UNEP (DEM) price appear to increase or actually increased from that which we reported in May. In some cases, as noted above, we changed the non-recurring formula. In some cases we changed the distribution *of loops among zones, thus changing the average. In a few cases, rates actually* rose. In AL, FL, LA, MS and SC, there is now a cross-connect charge that is part of the non-recurring charges that we amortize. In Oregon, the port rate increased slightly.

— Anna Maria Kovacs, Ph.D., CFA
— Kristin L. Burns, Ph.D.
— Gregory S. Vitale

COMPANIES MENTIONED IN THIS REPORT

Company Name	**Symbol**	**Price**
BellSouth	BLS	$25.44
SBC	SBC	$27.89
Qwest	Q	$2.82
Verizon	VZ	$31.18
AT&T	T	$11.79
WorldCom's MCI	WCOEQ	$0.12
Z-Tel	ZTEL	$1.44
Comcast	CMCSK	$22.99
Dow Jones Industrial	DJIA	8,887.87
S&P 500 Stock Index	SPX	941.06

EXHIBIT 1: UNBUNDLED NETWORK ELEMENT RATE COMPARISON MATRIX SUMMARY - ALL RBOCS

RBOC Regionwide Averages	ACCESS LINES (000s)	% OF TOTAL ACCESS LINES	LOOP RATE (per month)	TOTAL SWITCHING AND TRANSPORT (per month)	TOTAL SWITCHING AND TRANSPORT (per month)	ALL OTHER (per month)	ALL OTHER (per month)	FULL UNEP ORIGINATING AND TERMINATING	FULL UNEP ORIGINATING AND TERMINATING	MAY 2002 FULL UNEP ORIGINATING AND TERMINATING
				Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes	Assumes DEM minutes
			KEY INPUTS	SUBTOTALS				TOTALS		
Average, All RBOCS	145,078	100%	$13.04	$7.28	$6.59	$0.62	$0.66	$20.94	$20.28	$22.58
High			$16.60	$8.42	$6.97	$1.61	$2.01	$24.58	$24.38	$28.21
RBOC			Q	VZ	Q	BLS	BLS	Q	BLS	Q
Low			$11.03	$5.92	$5.91	$0.19	$0.18	$18.30	$17.50	$19.81
RBOC			SBC	BLS	SBC	VZ	VZ	SBC	SBC	VZ
BellSouth Regionwide Avg.	24,052	17%	$15.42	$5.92	$6.95	$1.61	$2.01	$22.94	$24.38	$26.06
High			$22.37	$6.78	$8.77	$2.63	$3.11	$29.34	$29.82	$36.09
State			MS	NC	GA	FL	FL	MS	MS	AL
Low			$12.55	$4.30	$5.31	$0.99	$1.18	$19.48	$20.88	$20.90
State			GA	TN	TN	KY	MS	TN	TN	TN
Qwest Regionwide Avg.	17,961	12%	$16.60	$7.55	$6.97	$0.43	$0.40	$24.58	$23.97	$28.21
High			$23.98	$12.22	$10.25	$0.75	$0.70	$34.95	$34.64	$39.98
State			MT	SD	SD	OR	OR	MT	MT	MT
Low			$13.43	$5.13	$4.44	$0.18	$0.18	$20.65	$20.54	$22.17
State			UT	NM	NM	IA	IA	UT	UT	OR
SBC Regionwide Avg.	58,138	40%	$11.03	$6.67	$5.91	$0.60	$0.55	$18.30	$17.50	$21.54
High			$20.52	$13.24	$10.13	$2.90	$2.82	$33.84	$30.63	$30.54
State			NV	NV	WI	WI	WI	NV	NV	NV
Low			$7.01	$3.85	$3.71	$0.03	$0.02	$12.20	$12.05	$14.50
State			OH	IN	IN	IN	IN	IN	IN	MI
AMERITECH Region Avg	21,841	38%	$9.21	$6.42	$5.94	$0.65	$0.58	$16.28	$15.73	$16.32
High			$10.90	$11.27	$10.13	$2.90	$2.82	$25.07	$23.85	$23.85
State			WI	WI	WI	WI	WI	WI	WI	WI
Low			$7.01	$3.85	$3.71	$0.03	$0.02	$12.20	$12.05	$14.50
State			OH	IN	IN	IN	IN	IN	IN	MI
PACIFIC BELL Region Avg	19,001	33%	$10.15	$6.90	$5.54	$0.08	$0.08	$17.13	$15.77	$27.54
High			$20.52	$13.24	$10.02	$0.08	$0.08	$33.84	$30.63	$30.54
State			NV	NV	NV	CA, NV	CA, NV	NV	NV	NV
Low			$9.93	$6.77	$5.44	$0.08	$0.08	$16.73	$15.36	$27.47
State			CA	CA	CA	CA, NV	CA, NV	CA	CA	CA
SWBT Region Avg.	17,296	30%	$14.31	$6.73	$6.29	$1.10	$1.02	$22.14	$21.63	$21.54
High			$15.71	$8.45	$8.03	$1.37	$1.30	$25.53	$25.03	$24.88
State			OK	OK	OK	OK	OK	OK	OK	OK
Low			$13.09	$5.75	$5.16	$0.27	$0.27	$20.13	$19.60	$19.49
State			AR	AR,KS	KS	MO	MO	AR	KS	KS
Verizon Regionwide Avg.	44,927	31%	$12.93	$8.69	$7.12	$0.19	$0.18	$21.82	$20.23	$19.81
High			$24.58	$20.82	$19.32	$0.69	$0.66	$45.52	$44.02	$44.02
State			WV	WV	WV	DE	DE	WV	WV	WV
Low			$9.52	$6.41	$5.25	$0.00	$0.00	$17.15	$15.14	$15.14
State			NJ	NY	PA	DC	DC	NJ	NJ	NJ
NYNEX Region Avg	19,487	43%	$12.92	$8.13	$6.82	$0.13	$0.12	$21.18	$19.85	$20.36
High			$18.10	$12.91	$10.54	$0.46	$0.38	$28.08	$25.42	$29.77
State			NH	MA	VT	NH	NH	MA	MA	NH
Low			$11.49	$6.41	$5.59	$0.04	$0.03	$17.98	$17.17	$17.35
State			NY	NY	NY	RI,VT	RI,VT	NY	NY	NY
BELL ATLANTIC Region Avg	25,439	57%	$12.95	$9.11	$7.35	$0.24	$0.22	$22.31	$20.52	$19.39
High			$24.58	$20.82	$19.32	$0.69	$0.66	$45.52	$44.02	$44.02
State			WV	WV	WV	DE	DE	WV	WV	WV
Low			$9.52	$6.49	$5.25	$0.00	$0.00	$17.15	$15.14	$15.14
State			NJ	PA	PA	DC	DC	NJ	NJ	NJ

Source Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports; CCMI estimates

EXHIBIT 1A: UNBUNDLED NETWORK ELEMENT RATE COMPARISON MATRIX SUMMARY - ALL RBOCS

RBOC Regionwide Averages		LOOP RATE (per month)	PORT RATE (per month)	Local originating SWITCHING (per MOU)	Local terminating SWITCHING (per MOU)	OTHER SWITCHING AND TRANSPORT (per MOU)	DUF (per month)	DUF (per month)	Other Switching and Transport (per month)	Other Switching and Transport (per month)	FEATURE COST (per month)	AMORTIZED NRC (per month)	TOTAL DEM (per line, per month)
							Assumes [4(f) originating minutes	Assumes DEM minutes	Assumes [4(f) originating minutes	Assumes DEM minutes			
		KEY INPUTS					SUBTOTALS						
Average, All RBOCS		$13.04	$2.02	$0.001663	$0.001547	$0.000675	$0.45	$0.48	$0.95	$0.82	$0.33	$0.17	2,171
	High	$16.60	$2.49	$0.002358	$0.002199	$0.001036	$1.46	$1.86	$1.46	$1.32	$0.61	$0.23	3,168
	RBOC	Q	SBC	VZ	VZ	Q	BLS	BLS	Q	Q	BLS	SBC	BLS
	Low	$11.03	$1.41	$0.001150	$0.001150	$0.000517	$0.06	$0.05	$0.73	$0.56	$0.20	$0.13	1,871
	RBOC	SBC	Q	SBC	SBC	BLS	VZ	VZ	BLS	VZ	VZ	Q, VZ	VZ
BellSouth Regionwide Avg.		$15.42	$1.73	$0.001151	$0.001151	$0.000517	$1.46	$1.86	$0.73	$0.93	$0.61	$0.14	3,168
	High	$22.37	$2.80	$0.001868	$0.001868	$0.000782	$2.45	$2.94	$1.10	$1.46	$2.26	$0.22	3,574
	State	MS	SC	LA	LA	KY	FL	FL	KY	KY	FL	NC	GA
	Low	$12.55	$1.15	$0.000703	$0.000703	$0.000408	$0.88	$1.03	$0.58	$0.80	$0.00	$0.06	2,754
	State	GA	KY	AL	AL	AL	NC	MS	AL	AL	AL, GA, KY, LA,	KY	MS
Qwest Regionwide Avg.		$16.60	$1.41	$0.001731	$0.001731	$0.001036	$0.30	$0.28	$1.46	$1.32	$0.40	$0.13	2,229
	High	$23.98	$2.64	$0.003469	$0.003469	$0.001301	$0.39	$0.46	$1.84	$1.66	$4.76	$0.36	2,947
	State	MT	WY	SD	SD	MN	MN, ND, OR,	ND	MN	MN	UT	OR	ND
	Low	$13.43	$0.93	$0.000000	$0.000000	$0.000721	$0.00	$0.00	$1.02	$0.83	$0.00	$0.00	2,001
	State	UT	UT	UT	UT	NM	IA	IA	NM	NM	:CO, IA, ID, MN, N	MN	SD
SBC Regionwide Avg.		$11.03	$2.49	$0.001150	$0.001150	$0.000746	$0.36	$0.32	$1.05	$0.81	$0.29	$0.23	1,974
	High	$20.52	$6.25	$0.002259	$0.002259	$0.005408	$1.06	$1.02	$7.63	$5.52	$0.90	$2.57	2,386
	State	NV	WI	OK	OK	NV	AK, KS, OK, TX	AK	NV	NV	CA	WI	AR
	Low	$7.01	$0.88	$0.000000	$0.000000	$0.000299	$0.00	$0.00	$0.42	$0.38	$0.00	$0.01	1,764
	State	OH	CA	IL, IN	IL, IN	TX	CA, NV, MO	CA, NV, MO	TX	TX	IL, IN, OH, MI, WI	IN	IL
AMERITECH Region Avg		$9.21	$4.20	$0.000436	$0.000436	$0.000810	$0.27	$0.20	$1.14	$0.88	$0.00	$0.38	1,906
	High	$10.90	$6.25	$0.001319	$0.001319	$0.001247	$0.33	$0.27	$1.76	$1.36	n/a	$2.57	2,097
	State	WI	WI	WI	WI	WI	WI	OH	WI	WI	n/a	WI	OH
	Low	$7.01	$2.53	$0.000000	$0.000000	$0.000548	$0.02	$0.01	$0.77	$0.58	n/a	$0.01	1,764
	State	OH	MI	IL, IN	IL, IN	MI	IN	IN	MI	MI	n/a	IN	IL
PACIFIC BELL Region Avg.		$10.15	$0.90	$0.001482	$0.001482	$0.001036	$0.00	$0.00	$1.46	$1.07	$0.88	$0.08	1,813
	High	$20.52	$1.63	$0.001610	$0.001610	$0.005408	n/a	n/a	$7.63	$5.52	$0.90	$0.08	1,814
	State	NV	NV	NV	NV	NV	n/a	n/a	NV	NV	CA	CA, NV	CA
	Low	$9.93	$0.88	$0.001480	$0.001480	$0.000944	n/a	n/a	$1.33	$0.98	$0.00	$0.08	1,786
	State	CA	CA	CA	CA	CA	n/a	n/a	CA	CA	NV	CA, NV	NV
SWBT Region Avg		$14.31	$2.08	$0.001688	$0.001688	$0.000345	$0.89	$0.81	$0.49	$0.44	$0.00	$0.21	2,237
	High	$15.71	$2.22	$0.002259	$0.002259	$0.000489	$1.06	$1.02	$0.69	$0.64	$0.00	$0.31	2,386
	State	OK	TX	OK	OK	OK	AR, KS, OK, TX	AR	OK	OK	n/a	OK	AR
	Low	$13.09	$1.61	$0.001490	$0.001490	$0.000299	$0.00	$0.00	$0.42	$0.38	$0.00	$0.18	2,115
	State	AR	AR, KS	AR, KS	AR, KS	TX	MO	MO	TX	TX	n/a	TX	KS
Verizon Regionwide Avg.		$12.93	$1.79	$0.002575	$0.002199	$0.000523	$0.06	$0.05	$0.74	$0.56	$0.20	$0.13	1,871
	High	$24.58	$2.57	$0.008868	$0.005622	$0.001540	$0.43	$0.35	$2.17	$1.65	$1.36	$0.56	2,277
	State	WV	NY	WV	WV	MA	NH	NH	MA	MA	MD	DE	WV
	Low	$9.52	$0.71	$0.001147	$0.001111	$0.000162	$0.00	$0.00	$0.23	$0.16	$0.00	$0.00	1,317
	State	NJ	NH	NY	NY	VA	NY, DC	NY, DC	VA	NJ	ME, MA, DC, DE,	RI, VT, DC	DC
NYNEX Region Avg.		$13.05	$2.24	$0.001832	$0.001804	$0.000875	$0.03	$0.03	$1.24	$0.95	$0.17	$0.09	1,908
	High	$20.96	$2.57	$0.004003	$0.004003	$0.001540	$0.43	$0.35	$2.17	$1.65	$0.32	$0.15	2,009
	State	NH	NY	VT	VT	MA	NH	NH	MA	MA	RI	MA	VT
	Low	$11.49	$0.71	$0.001147	$0.001111	$0.000578	$0.00	$0.00	$0.82	$0.63	$0.00	$0.00	1,870
	State	NY	NH	NY	NY	NY	NY	NY	NY	NY	ME, MA	RI, VT	MA
BELL ATLANTIC Region Avg		$12.95	$1.45	$0.003144	$0.002501	$0.000253	$0.09	$0.06	$0.36	$0.27	$0.22	$0.16	1,842
	High	$24.58	$2.23	$0.008868	$0.005622	$0.000696	$0.13	$0.12	$0.98	$0.70	$1.36	$0.56	2,277
	State	WV	DE	WV	WV	DC	DE, WV	WV	DC	WV	MD	DE	WV
	Low	$9.52	$0.73	$0.001802	$0.001615	$0.000162	$0.00	$0.00	$0.23	$0.16	$0.00	$0.00	1,317
	State	NJ	NJ	PA	PA	VA	DC	DC	VA	NJ	DC, DE, NJ	DC, NJ, WV	DC

Source: Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports; CCMI estimates.

EXHIBIT 2: UNBUNDLED NETWORK ELEMENT RATE COMPARISON MATRIX SUMMARY - BELLSOUTH

STATE	DENSITY ZONES	ACCESS LINES (000)	% of TOTAL ACCESS LINES	LOOP RATE (per month) KEY INPUT	TOTAL SWITCHING AND TRANSPORT (per month) Assumes 1413 originating minutes SUBTOTALS	TOTAL SWITCHING AND TRANSPORT (per month) Assumes DEM minutes	ALL OTHER (per month) Assumes 1411 originating minutes	ALL OTHER (per month) Assumes DEM minutes	FULL UNEP ORIGINATING AND TERMINATING Assumes 1411 originating minutes TOTALS	FULL UNEP ORIGINATING AND TERMINATING Assumes DEM minutes	MAY 2002 FULL UNEP ORIGINATING AND TERMINATING Assumes DEM minutes
Alabama	Avg	1,942	8%	$16.66	$4.55	$5.46	$1.07	$1.43	$22.28	$23.55	$36.09
	1			$11.55							
	2			$20.04							
	3			$33.65							
Florida	Avg	6,514	27%	$15.55	$6.03	$6.55	$2.63	$3.11	$24.21	$25.21	$26.18
	1			$11.77							
	2			$15.89							
	3			$30.70							
Georgia	Avg	4,115	17%	$12.55	$6.61	$8.77	$1.77	$2.51	$20.93	$23.83	$23.83
	1			$10.80							
	2			$12.47							
	3			$19.83							
Kentucky	Avg	1,232	5%	$17.26	$5.21	$6.53	$0.99	$1.29	$23.46	$25.08	$23.36
	1			$9.64							
	2			$14.37							
	3			$30.59							
Louisiana	Avg	2,351	10%	$16.24	$6.63	$7.87	$1.05	$1.26	$23.91	$25.37	$25.37
	1			$11.77							
	2			$22.39							
	3			$48.26							
Mississippi	Avg	1,326	6%	$22.37	$5.90	$6.28	$1.07	$1.18	$29.34	$29.82	$29.01
	1			$10.98							
	2			$15.91							
	3			$25.04							
	4			$43.68							
North Carolina	Avg	2,473	10%	$14.18	$6.78	$7.64	$1.10	$1.27	$22.06	$23.09	$27.00
	1			$10.75							
	2			$19.05							
	3			$30.33							
South Carolina	Avg	1,475	6%	$16.51	$6.15	$6.81	$1.08	$1.26	$23.74	$24.58	$26.91
	1			$13.76							
	2			$20.38							
	3			$26.04							
Tennessee	Avg	2,624	11%	$14.12	$4.30	$5.31	$1.07	$1.45	$19.48	$20.88	$20.90
	1			$12.48							
	2			$16.31							
	3			$21.32							

Source: Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports; CCMI estimates.

EXHIBIT 2A: UNBUNDLED NETWORK ELEMENT RATE COMPARISON MATRIX SUMMARY - BELLSOUTH

STATE	LOOP RATE (per month)	PORT RATE (per month)	LOCAL ORIGINATING SWITCHING (per MOU)	LOCAL TERMINATING SWITCHING (per MOU)	OTHER SWITCHING AND TRANSPORT (per MOU)	DUF (per month)	DUF (per month)	Other Switching and Transport (per month)	Other Switching and Transport (per month)	FEATURE COST (per month)	AMORTIZED NRC (per month)	TOTAL DEM (per line, per month)
						Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes			
	KEY INPUTS					SUBTOTALS						
Alabama	$16.66 $11.55 $20.04 $33.65	$2.24	$0.000703	$0.000703	$0.000408	$0.92	$1.28	$0.58	$0.80		$0.15	3,444
Florida	$15.55 $11.77 $15.89 $30.70	$1.17	$0.000766	$0.000766	$0.000505	$2.45	$2.94	$0.71	$0.85	$2.26	$0.17	2,960
Georgia	$12.55 $10.80 $12.47 $19.83	$1.79	$0.001633	$0.001633	$0.000559	$1.66	$2.40	$0.79	$1.14	$0.00	$0.11	3,574
Kentucky	$17.26 $9.64 $14.37 $30.59	$1.15	$0.001197	$0.001197	$0.000782	$0.93	$1.23	$1.10	$1.46	$0.00	$0.06	3,272
Louisiana	$16.34 $11.77 $22.39 $48.26	$1.36	$0.001868	$0.001868	$0.000465	$0.90	$1.12	$0.66	$0.81	$0.00	$0.14	3,052
Mississippi	$22.37 $10.98 $15.91 $25.04 $43.68	$2.64	$0.001027	$0.001027	$0.000513	$0.92	$1.03	$0.72	$0.81		$0.15	2,754
North Carolina	$14.18 $10.75 $19.05 $30.33	$2.28	$0.001500	$0.001500	$0.000561	$0.88	$1.05	$0.79	$0.94	$0.00	$0.22	2,944
South Carolina	$16.51 $13.76 $20.38 $26.04	$2.80	$0.001052	$0.001052	$0.000534	$0.93	$1.11	$0.75	$0.90		$0.15	2,954
Tennessee	$14.12 $12.48 $16.31 $21.32	$1.70	$0.000804	$0.000804	$0.000432	$0.98	$1.36	$0.61	$0.85	$0.00	$0.09	3,438

Source: Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports: CCMI estimates.

EXHIBIT 3: UNBUNDLED NETWORK ELEMENT RATE COMPARISON MATRIX SUMMARY - QWEST

STATE	DENSITY ZONES	ACCESS LINES (000s)	% of TOTAL ACCESS LINES	LOOP RATE (per month)	TOTAL SWITCHING AND TRANSPORT (per month)	TOTAL SWITCHING AND TRANSPORT (per month)	ALL OTHER (per month)	ALL OTHER (per month)	FULL UNEP ORIGINATING AND TERMINATING	FULL UNEP ORIGINATING AND TERMINATING	MAY 2002 FULL UNEP ORIGINATING AND TERMINATING
					Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes	Assumes DEM minutes
				KEY INPUT	SUBTOTALS				TOTALS		
Arizona	Avg	3,001	17%	$15.85	$10.05	$8.80	$0.36	$0.33	$26.26	$24.98	$36.62
	1			$5.91							
	2			$12.31							
	3			$32.74							
Colorado	Avg	2,950	16%	$15.86	$6.82	$6.12	$0.45	$0.40	$23.12	$22.38	$21.95
	1			$5.91							
	2			$12.31							
	3			$32.74							
Idaho	Avg	585	3%	$20.42	$6.93	$5.96	$0.50	$0.44	$27.85	$26.82	$35.14
	1			$15.81							
	2			$24.01							
	3			$40.92							
Iowa	Avg	1,165	6%	$16.47	$7.22	$6.81	$0.18	$0.18	$23.87	$23.45	$28.80
	1			$13.11							
	2			$15.64							
	3			$27.27							
Minnesota	Avg	2,383	13%	$17.87	$7.38	$6.80	$0.39	$0.35	$25.64	$25.02	$25.02
	1			$8.81							
	2			$12.33							
	3			$14.48							
	4			$21.91							
Montana	Avg	394	2%	$23.98	$10.45	$10.15	$0.52	$0.51	$34.95	$34.64	$39.98
	BRA			$23.10							
	1			$23.90							
	2			$27.13							
	3			$29.29							
Nebraska	Avg	508	3%	$17.51	$8.69	$8.80	$0.31	$0.31	$26.51	$26.62	$30.80
	1			$12.14							
	2			$28.11							
	3			$62.50							
New Mexico	Avg	894	5%	$21.43	$5.13	$4.44	$0.48	$0.42	$27.04	$26.29	$25.91
	1			$17.75							
	2			$20.30							
	3			$26.23							
North Dakota	Avg	226	1%	$17.79	$8.59	$10.01	$0.57	$0.64	$26.95	$28.44	$33.24
	1			$14.78							
	2			$24.92							
	3			$56.44							
Oregon	Avg	1,522	8%	$15.00	$7.27	$6.59	$0.75	$0.70	$23.02	$22.29	$22.17
	1			$13.95							
	2			$25.20							
	3			$56.21							
South Dakota	Avg	272	2%	$21.09	$12.22	$10.25	$0.41	$0.37	$33.72	$31.71	$32.58
	1			$17.01							
	2			$18.54							
	3			$24.37							
Utah	Avg.	1,140	6%	$13.43	$6.95	$6.85	$0.27	$0.25	$20.65	$20.54	$29.69
	urban			$11.41							
	suburban			$13.83							
	rural			$19.11							
Washington	Avg	2,647	15%	$14.41	$5.87	$5.86	$0.50	$0.50	$20.78	$20.77	$24.00
	1			$6.41							
	2			$11.35							
	3			$12.76							
	4			$14.31							
	5			$19.06							
Wyoming	Avg	274	2%	$23.58	$8.53	$7.92	$0.56	$0.52	$32.67	$32.02	$37.45
	BRA			$19.91							
	1			$26.94							
	2			$30.13							
	3			$40.98							

Source. Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports, CCMI estimates

EXHIBIT 3A: UNBUNDLED NETWORK ELEMENT RATE COMPARISON MATRIX SUMMARY - QWEST

STATE	LOOP RATE (per month)	PORT RATE (per month)	Local originating SWITCHING (per MOU)	Local terminating SWITCHING (per MOU)	OTHER SWITCHING AND TRANSPORT (per MOU)	DUF (per month) Assumes 1411 originating minutes	DUF (per month) Assumes DEM minutes	Other Switching and Transport (per month) Assumes 1411 originating minutes	Other Switching and Transport (per month) Assumes DEM minutes	FEATURE COST (per month)	AMORTIZED NRC (per month)	TOTAL DEM (per month, per line)
	KEY INPUTS					SUBTOTALS						
Arizona	$15.85 $5.91 $12.31 $32.74	$1.68	$0.002800	$0.002800	$0.001029	$0.26	$0.22	$1.45	$1.24	$0.00	$0.10	2,103
Colorado	$15.86 $5.91 $12.31 $32.74	$1.53	$0.001610	$0.001610	$0.000929	$0.31	$0.27	$1.31	$1.14	$0.00	$0.13	2,144
Idaho	$20.42 $15.81 $24.01 $40.92	$1.34	$0.001733	$0.001733	$0.000929	$0.32	$0.26	$1.31	$1.08	$0.00	$0.18	2042
Iowa	$16.47 $13.11 $15.64 $27.27	$1.15	$0.001929	$0.001929	$0.000929	$0.00	$0.00	$1.31	$1.22	$0.00	$0.18	2,300
Minnesota	$17.87 $8.81 $12.33 $14.48 $21.91	$1.08	$0.001810	$0.001810	$0.001301	$0.39	$0.35	$1.84	$1.66	$0.00	$0.00	2,240
Montana	$23.98 $23.10 $23.90 $27.13 $29.29	$1.58	$0.002923	$0.002923	$0.000929	$0.35	$0.34	$1.31	$1.27	$0.34	$0.17	2,383
Nebraska	$17.51 $12.14 $28.11 $62.50	$2.47	$0.001989	$0.001989	$0.000929	$0.29	$0.30	$1.31	$1.33	$0.00	$0.02	2,511
New Mexico	$21.43 $17.75 $20.30 $26.23	$1.38	$0.001108	$0.001108	$0.000721	$0.31	$0.25	$1.02	$0.83	$0.00	$0.17	2,014
North Dakota	$17.79 $14.78 $24.92 $56.44	$1.27	$0.002435	$0.002435	$0.000929	$0.39	$0.46	$1.31	$1.56	$0.00	$0.18	2,947
Oregon	$15.00 $13.95 $25.20 $56.21	$1.26	$0.001330	$0.001330	$0.001178	$0.39	$0.34	$1.66	$1.44	$1.08	$0.36	2,134
South Dakota	$21.09 $17.01 $18.54 $24.37	$1.84	$0.003469	$0.003469	$0.001286	$0.25	$0.20	$1.81	$1.47	$0.00	$0.17	2,001
Utah	$13.43 $11.41 $13.83 $19.11	$0.93 $0.92 $0.90 $1.02	$0.000000	$0.000000	$0.000890	$0.18	$0.16	$1.26	$1.16	$4.76	$0.09	2,272
Washington	$14.41 $6.41 $11.35 $12.76 $14.31 $19.06	$1.34	$0.001200	$0.001200	$0.001112	$0.39	$0.39	$1.57	$1.56	$0.00	$0.11	2,463
Wyoming	$23.58 $19.91 $26.94 $30.13 $40.98	$2.64	$0.001854	$0.001854	$0.000929	$0.39	$0.35	$1.31	$1.17	$0.00	$0.18	2,212

Source. Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports; CCMI estimates

EXHIBIT 4: UNBUNDLED NETWORK ELEMENT RATE COMPARISON MATRIX SUMMARY - SBC

STATE	DENSITY ZONES	ACCESS LINES (000s)	% of TOTAL ACCESS LINES	LOOP RATE (per month)	TOTAL SWITCHING AND TRANSPORT (per month)	TOTAL SWITCHING AND TRANSPORT (per month)	ALL OTHER (per month)	ALL OTHER (per month)	FULL UNEP ORIGINATING AND TERMINATING	FULL UNEP ORIGINATING AND TERMINATING	May 2002 FULL UNEP ORIGINATING AND TERMINATING
					Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes	Assumes DEM minutes
				KEY INPUT	SUBTOTALS				TOTALS		
LEC - Ameritech											
Illinois	wtd avg	7,216	12%	$9.53	$6.35	$5.96	$0.41	$0.31	$16.28	$15.81	$15.96
	metro			$2.59							
	suburban			$7.07							
	rural			$11.40							
Indiana	wtd avg	2,396	4%	$8.32	$3.85	$3.71	$0.03	$0.02	$12.20	$12.05	$16.87
	metro			$8.03							
	suburban			$8.15							
	rural			$8.99							
Michigan	wtd avg	5,629	10%	$10.16	$4.59	$4.09	$0.30	$0.25	$15.06	$14.50	$14.50
	metro			$8.47							
	suburban			$8.73							
	rural			$12.54							
Ohio	wtd avg	4,306	7%	$7.01	$7.80	$7.32	$0.64	$0.59	$15.45	$14.93	$14.96
	urban			$5.93							
	suburban			$7.97							
	rural			$9.52							
Wisconsin	wtd avg	2,294	4%	$10.90	$11.27	$10.13	$2.90	$2.82	$25.07	$23.85	$23.85
	suburban			$10.90							
	rural			$10.90							
LEC - Pacific Bell											
California	wtd avg	18,612	32%	$9.93	$6.72	$5.44	$0.08	$0.08	$16.78	$15.46	$27.47
	1			$8.38							
	2			$11.27							
	3			$19.64							
Nevada	wtd. avg	389	1%	$20.52	$13.24	$10.02	$0.08	$0.08	$33.84	$30.63	$30.54
	urban			$11.77							
	suburban			$22.64							
	rural			$66.25							
LEC - Southwestern Bell											
Arkansas	wtd. avg	1,071	2%	$13.09	$5.73	$5.61	$1.29	$1.26	$20.13	$19.96	$19.82
	urban			$11.86							
	suburban			$13.64							
	rural			$23.34							
Kansas	wtd avg	1,423	2%	$13.30	$5.75	$5.16	*$1.30*	*$1.15*	$20.35	$19.60	$19.49
	urban			$11.86							
	suburban			$13.64							
	rural			$23.34							
Missouri	wtd avg	2,742	5%	$15.19	$7.93	$7.26	$0.27	$0.27	$23.39	$22.72	$22.63
	urban			$12.71							
	suburban			*$18.64*							
	rural			$19.74							
	MO-Spgfld			$16.41							
Oklahoma	wtd avg	1,712	3%	$15.71	$8.45	$8.03	$1.37	$1.30	$25.53	$25.03	$24.88
	urban			$12.14							
	suburban			$13.65							
	rural			$26.25							
Texas	wtd avg	10,348	18%	$14.31	$6.36	$5.98	$1.24	$1.14	$21.71	$21.22	$21.16
	urban			$12.14							
	suburban			$13.65							
	rural 1			$18.98							

Source: Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports; CCMI estimates.

EXHIBIT 4A: UNBUNDLED NETWORK ELEMENT RATE COMPARISON MATRIX SUMMARY - SBC

STATE	LOOP RATE (per month)	PORT RATE (per month)	Local originating SWITCHING (per MOU)	Local terminating SWITCHING (per MOU)	OTHER SWITCHING AND TRANSPORT (per MOU)	DUF (per month)	DUF (per month)	Other Switching and Transport (per month)	Other Switching and Transport (per month)	FEATURE COST (per month)	AMORTIZED NRC (per month)	TOTAL DEM (per month, per line)
						Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes			
	KEY INPUTS					SUBTOTALS						
LEC - Ameritech												
Illinois	$9.53 $2.59 $7.07 $11.40	$5.01	na	na	$0.000947	$0.32	$0.23	$1.34	$0.95	$0.00	$0.08	1,764
Indiana	$8.32 $8.03 $8.15 $8.99	$2.98	$0.000000	$0.000000	$0.000617	$0.02	$0.01	$0.87	$0.73	$0.00	$0.01	2,071
Michigan	$10.16 $8.47 $8.73 $12.54	$2.53	$0.000522	$0.000522	$0.000548	$0.24	$0.18	$0.77	$0.58	$0.00	$0.07	1,869
Ohio	$7.01 $5.93 $7.97 $9.52	$4.63	$0.000826	$0.000826	$0.000800	$0.31	$0.27	$1.13	$0.96	$0.00	$0.33	2,097
Wisconsin	$10.90 $10.90 $10.90	$6.25	$0.001319	$0.001319	$0.001247	$0.33	$0.26	$1.76	$1.36	$0.00	$2.57	1,908
LEC - Pacific Bell												
California	$9.93 $8.38 $11.27 $19.64	$0.88	$0.001480	$0.001480	$0.000944	$0.00	$0.00	$1.33	$0.98	$0.90	$0.03	1,814
Nevada	$20.52 $11.77 $22.64 $66.25	$1.63	$0.001610	$0.001610	$0.005408	$0.00	$0.00	$7.63	$5.52	$0.00	$0.08	1,786
LEC - Southwestern Bell												
Arkansas	$13.09 $11.86 $13.64 $23.34	$1.61	$0.001490	$0.001490	$0.000326	$1.06	$1.02	$0.46	$0.44	$0.00	$0.23	2,386
Kansas	$13.30 $11.86 $13.64 $23.34	$1.61	$0.001490	$0.001490	$0.000326	$1.06	$0.91	$0.46	$0.39	$0.00	$0.24	2,115
Missouri	$15.19 $12.71 $18.64 $19.74 $16.41	$1.89	$0.002192	$0.002192	$0.000446	$0.00	$0.00	$0.63	$0.56	$0.00	$0.27	2,196
Oklahoma	$15.71 $12.14 $13.65 $26.25	$2.18	$0.002259	$0.002259	$0.000489	$1.06	$0.99	$0.69	$0.64	$0.00	$0.31	2,303
Texas	$14.11 $12.14 $13.65 $18.98	$2.22	$0.001507	$0.001507	$0.000299	$1.06	$0.96	$0.42	$0.38	$0.00	$0.18	2,238

Source Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports, CCMI estimates

EXHIBIT 5: UNBUNDLED NETWORK ELEMENT RATE COMPARISON MATRIX SUMMARY - VERIZON

STATE	DENSITY ZONES	ACCESS LINES (000s)	% of TOTAL ACCESS LINES	LOOP RATE (per month)	TOTAL SWITCHING AND TRANSPORT (per month)	TOTAL SWITCHING AND TRANSPORT (per month)	ALL OTHER (per month)	ALL OTHER (per month)	FULL UNEP ORIGINATING AND TERMINATING	FULL UNEP ORIGINATING AND TERMINATING	MAY 2002 FULL UNEP ORIGINATING AND TERMINATING
					Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes	Assumes DEM minutes
				KEY INPUT	SUBTOTALS				TOTALS		
LEC - NYNEX											
Maine	Avg	760	2%	$16.18	$7.25	$5.72	$0.18	$0.17	$23.61	$22.07	$22.18
	1			$11.44							
	2			$13.47							
	3			$18.75							
Massachusetts	Avg	4,589	10%	$14.98	$12.91	$10.26	$0.19	$0.18	$28.08	$25.42	$25.77
	1			$7.54							
	2			$14.11							
	3			$16.12							
	4			$20.04							
New Hampshire	Avg	825	2%	$18.10	$7.21	$6.03	$0.46	$0.38	$25.77	$24.51	$29.77
	1			$11.97							
	2			$16.04							
	3			$25.00							
New York	Avg	12,253	27%	$11.49	$6.41	$5.59	$0.08	$0.08	$17.98	$17.17	$17.35
	1			$7.70							
	2			$11.31							
	3			$15.51							
Rhode Island	Avg	681	2%	$13.93	$6.56	$5.73	$0.04	$0.03	$20.54	$19.70	$22.07
	1			$11.19							
	2			$15.44							
	3			$19.13							
Vermont	Avg	378	1%	$14.41	$12.71	$10.54	$0.04	$0.03	$27.16	$24.99	$25.09
	1			$7.72							
	2			$8.35							
	3			$21.63							
LEC - BELL ATLANTIC											
D.C.	1	1,019	2%	$10.81	$9.94	$6.02	$0.00	$0.00	$20.75	$16.83	$16.83
Delaware	Avg	613	1%	$12.05	$9.68	$8.09	$0.69	$0.66	$22.42	$20.81	$20.31
	1			$10.07							
	2			$13.13							
	3			$16.67							
Maryland	Avg	4,101	9%	$14.50	$13.15	$11.50	$0.26	$0.25	$27.91	$26.25	$19.28
	1			$12.11							
	2			$12.85							
	3			$25.96							
	4			$18.40							
New Jersey	Avg	7,030	16%	$9.52	$7.53	$5.55	$0.10	$0.07	$17.15	$15.14	$15.14
	1			$8.12							
	2			$9.59							
	3			$10.92							
Pennsylvania	Avg	7,309	16%	$13.81	$6.49	$5.25	$0.20	$0.17	$20.50	$19.23	$19.36
	1			$10.25							
	2			$11.00							
	3			$14.00							
	4			$16.75							
Virginia	Avg	4,460	10%	$13.76	$9.56	$7.57	$0.54	$0.52	$23.86	$21.85	$21.68
	1			$10.74							
	2			$16.45							
	3			$29.40							
West Virginia	Avg	907	2%	$24.58	$20.82	$19.32	$0.13	$0.12	$45.52	$44.02	$44.02
	1			$14.49							
	2			$22.04							
	3			$43.44							

Source. Company Financial reports and regulatory filings including tariffs. interconnection agreements and ARMIS reports; CCMI estimates

Exhibit 5A: Unbundled Network Element Rate Comparison Matrix Summary - Verizon

STATE	LOOP RATE (per month)	PORT RATE (per month)	Local originating SWITCHING (per MOU)	Local terminating SWITCHING (per MOU)	OTHER SWITCHING AND TRANSPORT (per MOU)	DUF (per month)	DUF (per month)	Other Switching and Transport (per month)	Other Switching and Transport (per month)	FEATURE COST (per month)	AMORTIZED NRC (per month)	TOTAL DFM (per line, per month)
						Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes			
	KEY INPUTS					SUBTOTALS						
LEC - NYNEX												
Maine	$16.18 $11.44 $13.47 $18.75	$0.94	$0.001680	$0.001680	$0.001529	$0.04	$0.03	$2.16	$1.64	$0.00	$0.14	1,871
Massachusetts	$14.98 $7.54 $14.11 $16.12 $20.04	$2.00	$0.003537	$0.003537	$0.001540	$0.04	$0.03	$2.17	$1.65	$0.00	$0.15	1,870
New Hampshire	$18.10 $11.97 $16.04 $25.00	$0.71	$0.002064	$0.002064	$0.000853	$0.43	$0.35	$1.20	$0.98	$0.20	$0.03	2,007
New York	$11.49 $7.70 $11.31 $15.51	$2.57	$0.001147	$0.001111	$0.000578	$0.00	$0.00	$0.82	$0.63	$0.23	$0.08	1,910
Rhode Island	$11.93 $11.19 $15.44 $19.13	$1.86	$0.001358	$0.001192	$0.000853	$0.04	$0.03	$1.20	$0.98	$0.32	$0.00	2,000
Vermont	$14.41 $7.72 $8.35 $21.63	$1.03	$0.004003	$0.004003	$0.001228	$0.04	$0.03	$1.73	$1.41	$0.06	$0.00	2,009
LEC - BELL ATLANTIC												
D.C.	$10.81	$1.55	$0.003000	$0.003000	$0.000696	$0.00	$0.00	$0.98	$0.52	$0.00	$0.00	1,317
Delaware	$12.05 $10.07 $13.13 $16.67	$2.23	$0.003634	$0.001927	$0.000200	$0.13	$0.10	$0.28	$0.22	$0.00	$0.56	1,944
Maryland	$14.50 $12.11 $12.85 $25.96 $18.40	$1.90	$0.003800	$0.003800	$0.000362	$0.05	$0.04	$0.51	$0.43	$1.36	$0.22	2,058
New Jersey	$9.52 $8.12 $9.59 $10.92	$0.73	$0.002773	$0.002508	$0.000163	$0.10	$0.07	$0.23	$0.16	$0.00	$0.00	1,751
Pennsylvania	$13.81 $10.25 $11.00 $14.00 $16.75	$1.90	$0.001802	$0.001615	$0.000242	$0.09	$0.07	$0.34	$0.25	$0.00	$0.11	1,799
Virginia	$13.76 $10.74 $16.45 $29.40	$1.30	$0.004129	$0.002079	$0.000162	$0.09	$0.07	$0.23	$0.17	$0.00	$0.46	1,874
West Virginia	$24.58 $14.49 $22.04 $43.44	$1.60	$0.008861	$0.005622	$0.000536	$0.13	$0.12	$0.76	$0.70	$0.00	$0.00	2,277

Source: Company Financial reports and regulatory filings including tariffs, interconnection agreements and ARMIS reports, CCMI estimates.

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SBC Communications, Inc. (SBC)
Meeting with SBC CFO highlights key initiatives; no estimate or ratings change.

Analyst Comment

11:05 AM – August 22, 2002

Market Outperformer

Large-Cap Value

Price: US$28.11

United States

Stock data		Price performance	1M	3M	12M
52-week range	US$47.34-23.30	Absolute	5%	-19%	-35%
Yield	3.8%	Rel to S&P 500	-7%	-7%	-17%

Capitalization		Forecasts/valuation	2002E	2003E
Market cap	US$93.5bn	EPS*	US$2.30	US$2.30
Latest net debt/(cash)	-	GSCOPE EPS*	-	-
Free float	-	GSCOPE P/E	-	-
Shares outstanding	3325mn	* May differ from US GAAP		

SBC considers fixing the UNE-P mess, as a prime corporate objective. Delayed LD entry in key locations, combined with the lowest UNE-P rates in the country, have uniquely exposed SBC to profit-eroding share loss. Despite this, SBC's CFO Randall Stephenson still sees stable cash flows through aggressive cost cutting, combined with the ability to maintain trends in share repurchases and dividend hikes. Consolidation in wireless is another key objective of SBC. Acknowledging the proliferation of conversations among wireless carriers, Stephenson indicated all talks are still preliminary. In the meantime Cingular is raising prices, sacrificing sub growth, and looking to improve profits.

Full details

WHAT TO DO WITH THE STOCK? We continue our cautious view of telecom, although recent stock price declines make us somewhat less cautious.
Within the group the Bells and rural telcos should provide the best returns. And, within the Bells, we continue to view Verizon as the best choice right now. As management indicates, share loss to UNE-P is going to be quite damaging to SBC. And we believe it will suffer the greatest consequences of this phenomenon among the three Bells. Thus, the valuation premium that SBC trades at relative to Verizon on P/E, EV/EBITDA, and dividend yield is probably not sustainable over the next six months. We continue to use our current EPS estimates of $2.30 for this year and next.

UNE-P A BIG PROBLEM WITHOUT LD. SBC has been the most vocal critic of UNE-P, and is working hard to raise prices and diminish the negative effect. In the absence of pervasive long distance approval, UNE-P has been and will continue to be very damaging to SBC. With LD approval in the Ameritech region not likely until the middle or second half of '03, and California not likely until yearend '02, SBC stands quite exposed at the moment. However, we should not extrapolate the SBC experience uniformly to the other RBOCs. No others face the unique combination of low priced UNE- P, high residential rates (in the Ameritech region), big concentrated industrial states, and no LD capability. Thus, we don't see Verizon in particular, and BellSouth to a lesser degree has having the same degree of exposure. So, yes, if an ILEC loses a customer to UNE-P it's a big hit to the bottom line – but it has to lose the customer for the hit to be taken.
And in our view VZ and BLS are likely to be able to offset this materially better than SBC over the next year. It should be noted that SBC has been enjoying these same benefits share retention in its states where it has long distance approval. SBC intends to file cost studies in key jurisdictions, using the regulatory path as one attempt at raising rates.
In addition, it continues to try to use bundling as aggressively as possible to offset share loss.

WIRELESS CONSOLIDATION A KEY OBJECTIVE. Newspaper reports have

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exaggerated the speed of wireless consolidation and the progress that has been made to date. However, *the desirability of getting a deal done is obvious, and the company acknowledged active* conversations. Mr. Stephenson noted that of the two options for deals AWE presents less dilution, but greater regulatory and integration hurdles. Voicestream presents higher dilution but far easier regulatory approval and integration. Furthermore, similar to press accounts, he indicated a deal for Voicestream may be impractical without taking in DT as an equity participant (i.e. no all–cash deal.) And, importantly, SBC is open to that possibility.

WIRELESS PRICE HIKES, DESPITE SLOWER SUB GROWTH. The healing effects of wireless mergers are not nearly upon us yet. In the meantime, Cingular is taking steps to 'heal thyself.' The price hikes are geared to boost profitability, even as it sacrifices sub growth. The particular increase in national plan rates announced this week are geared to both reduce off– network roaming costs and slow down the consumption of TDMA network capacity. SBC and BLS are fully expecting their joint venture to experience low to no sub growth as a result of these actions as well as the customer churn that will be stimulated by the WorldCom reseller shift.

CAPEX TO REVENUE SHOULD BE NO HIGHER THAN 15%, AND WILL BE LOWER ABSENT GROWTH. There is a broad effort to cut capex in both wireline and wireless operations. In wireline, Stephenson indicated that current thinking is that capex to sales should be no higher than 15%, and that in the current environment it should be no higher than 13%, and yet it is. *Thus, further capex cuts should occur. In our view, if demand recovery continues to falter it* would not be surprising to see capex to sales fall below the 13% rate, as it has in other countries. On the wireless side, capex cuts are also anticipated. In our view, slower capex spending in wireless is further supported by the prospects of industry consolidation.

COST REDUCTIONS KEY TO MAINTAINING EARNINGS AND BOOSTING MARGINS. SBC sees the margin differential between it and VZ and BLS as indicating an opportunity for further cost cutting. Pointing to opportunities in consolidating call centers, raising efficiencies in network operations, and generally trimming overhead costs, Stephenson is focused and confident in using these steps to help improve margins in the face of share loss.

CALIFORNIA DSL EXPERIENCE GIVES CONFIDENCE IN LONG TERM POTENTIAL. In California, SBC is enjoying the benefits of scale DSL operations, having achieved about 10% penetration so far. As a result, operations are already EBITDA positive and on the trajectory to reach SBC's targeted hurdle rate.
The steps that got California to scale include: an effective self– installation program; low help desk costs; effective churn control (down towards 2–3%); and effective marketing against the cable operators. SBC believes that mass market deployment of DSL will occur, and that tiered offerings are one step in getting there. This will allow lower monthly prices for lower speeds, but should be able to maintain an average monthly price of approximately $40. This is a little higher than our long term estimate, but directionally our models look at the market in the same way. Due to the absence of long distance approval in California and the Ameritech states, SBC will continue to try to bundle DSL as a way of offsetting share loss, indicating that churn falls 75% for those customers taking DSL on top of their local service.

BLS: US$ 25.99, SBC: US$ 28.11, VZ: US$ 32.35

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Equity Research

Industry Update

Telecom Regulation

August 22, 2002

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BELLS RETRAIN GUNS ON UNE-P, BUT QUICK KILL UNLIKELY

All relevant disclosures appear on the last page of this report.

KEY POINTS:

- **We believe the debate at the FCC over the future of UNE-P has surpassed the broadband debate in intensity and near-term importance for the telecom sector, as the Bells have been thrown on the defensive due to line losses to rivals.**
- **We believe that the Bells (SBC, BLS, VZ, Q) will have a difficult time convincing regulators to quickly eliminate the rights of local competitors to lease out Bell networks (UNE-P) at deep discounts. This is problematic for all the Bells but, in our view, is particularly problematic for SBC as its lack of long-distance progress in the Ameritech region *makes it more vulnerable to UNE-P competitors. The Bells could gain some immediate relief in business markets (as* well as some relief toward deregulating their broadband offerings in separate proceedings), but we doubt the FCC will eliminate UNE-P in residential markets in the near term.**
- **We believe the Commission is likely to establish a sunset or triggers for phasing out UNE-P. While the details of such rules are far from settled, we think the result will give key UNE-P providers, WorldCom (WCOEQ) and AT&T (T), time to continue to change the facts on the ground. The more they win new local customers, the more they increase the potential for a backlash if the phase-out dismantles the main platform for residential competition.**
- **Even if the FCC scraps or pares back UNE-P, many state regulators would likely try to retain it. Also, all decisions would be subject to court challenge that could take years to resolve, with the courts likely to maintain the legal status quo in the meantime.**
- **While the Bells will not gain immediate regulatory relief, we believe that through bundling and other marketing efforts, they can significantly reduce the negative impact of UNE-P competition.**
- **We believe another potential nightmare for the Bells would be if cable begins using UNE-P to accelerate its budding cable telephony offerings.**

As we noted when WorldCom announced its "Neighborhood" plan, the intensified efforts by **WorldCom (WCOEQ) and AT&T (T)** to compete using the Bell Unbundled Network Elements Platform (UNE-P) has dramatically raised the stakes of the FCC unbundling policy debates. (See our April 23 note *WCOM/MCI Bundled Phone Offer Challenges Rivals and Regulators.*) The most recent Bell quarterly reports suggest that the impact of UNE-P is quickly growing. (For a discussion of the economics of UNE-P, see the report by our colleagues Daniel Zito and Brad Wilson, *Cautious Long-Distance Outlook* , June 27, 2002. For a state-by-state UNE pricing and sensitivity study, see attachment to *VZ: Comments on RBOC Weakness* , August 21, 2002, by our collegues Michael J. Balhoff and Christopher. C. King.)

The impact of UNE-P has caused the **Regional Bell Operating Companies (SBC, BLS, Q, VZ)** to shift their priorities in seeking regulatory relief. While the core Bell policy thrust had been to gain deregulation of their broadband services, recent events suggest the Bells have ramped up their lobbying efforts to cripple the ability of competitors to use UNE-P to gain market share in the traditional voice market.

Some in the Bell camp have predicted the FCC will act to eliminate UNE-P in a flash cut. FCC action on UNE-P is still months away (probably 4-8 months) but our current view is that prediction is likely to prove largely inaccurate in the near term, particularly concerning the availability of UNE-P in residential markets. This note outlines some of the dynamics affecting the resolution of the UNE-P debate.

Background on UNE-P. UNE-P offers competitors an opportunity to use all the UNEs at discounted "TELRIC" (Total Element Long Run Incremental Cost) rates and to add further value-added services on top of the platform. According to an industry estimate building on a FCC survey of incumbent local exchange carriers (ILECs), of the 20-plus million lines won by long-distance companies (IXCs) and other local competitors (CLECs) as of June 2002, about 7.7 million are UNE-P based. It is the fastest growing method of competitive entry. In 2001, according to FCC data, more than 60% of the CLEC line growth was due to UNE-P, about twice the rate in 2000. T and WCOEQ are capturing most of the UNE-P line growth but other companies are responsible for about 43% of UNE-P lines.

Reasons for Increase in UNE-P Competition. While UNE-P has been available for some time, its use has ramped up significantly over the last year. In our view, this is due to two critical developments. First, numerous states have lowered wholesale UNE-P rates. Second, the Bells have achieved sufficient long-distance entry to give the IXCs the incentive to more aggressively use UNE-P to protect their existing markets.

Differing Impact on the Bells. UNE-P has had a differing impact on each of the Bells, affecting SBC and BLS more negatively in the last quarter than VZ. The reason for this difference, in our view, is that VZ's relative lead in gaining long-distance entry (with 74% of its lines already eligible) has given it the ability to bundle local and long distance in more states, providing a stronger defense against competition. As a measure of the value of long distance offerings in combating UNE-P competition, we note that SBC estimates that where it offers long distance, it doubles its winback rates. We also think that VZ's intensified strategy of bundling their landline voice services with wireless and Internet access services will provide an even stronger defense against UNE-P competitors.

We surmise that BLS will have greater success in stemming the tide of UNE-P line loss once it gains the right to offer long distance services in more states. It currently has applications pending in 5 of the remaining 7 states where it cannot offer such services. An FCC decision on these 5 is due in mid-September and we believe the prospects for approval are good.

In light of UNE-P competition, SBC's problems in advancing its Sec. 271 long-distance applications become more important to SBC's financial picture. This is particularly true in the Ameritech region and California. SBC has a large window of vulnerability in the Ameritech region where state regulators have been aggressive in providing incentives for UNE-P competition, but SBC has not made significant progress with the testing and verification required for Sec. 271 approval. In California, SBC has better prospects, as it hopes to send the FCC its long-distance application in September. Given the TELRIC price cuts just announced by the state PUC and California's size, we expect a major push by T to sign up customers before SBC gets approval to offer long distance services.

Q has some vulnerability to UNE-P, due to its lack of long-distance approval, but we expect Q to gain approval to offer long distance services in a number of states in the next several months. While Q's states are not the highest priority states for the UNE-P based competitors, we note that UNE-P competition has attracted more than 5% market share in Iowa, North Dakota, South Dakota, and Wyoming.

The Bells' Attack on UNE-P. The Bells have two basic strategies for attacking the viability of UNE-P. First, they can challenge the TELRIC discounts at both the federal and state levels in an effort to raise UNE-P rates and squeeze their competitors' margins. Verizon recently took this tact at the FCC through a letter by its General Counsel suggesting ways the agency could "clarify" TELRIC, all in ways that would have the affect of raising the price for competitors. We expect the other Bell companies to join this effort. The Bells are also likely to challenge individual state UNE pricing decisions in regulatory proceedings and in court. For example, SBC has already filed a petition to raise TELRIC rates in OH and we have heard they are considering filing a petition to do the same in Illinois, though they are waiting until after the November election, in which three of the five members of the State PUC could change. The Bells are also contemplating filing suits challenging some of the states' TELRIC decisions as an unconstitutional taking.

Second, as part of the FCC's "Triennial Review" proceding, the Bells hope to convince the FCC to remove certain elements, most notably switching, from the UNE list. Such a decision would not only raise the cost of providing services through UNE-P, it also would make UNE-P impractical for the consumer market due to the difficulty of seamlessly migrating tens of thousands of lines from the ILEC's to the competitor's switches. We note that as offering unbundled switching is specifically listed as one of the requirements for gaining long-distance entry, the legal burden of eliminating the requirement is likely to be higher.

While the Republican majority at the Commission wants to move in a deregulatory direction, we do not believe that majority has yet decided how that impulse should be channeled in revising the UNE rules. The staff is evaluating the effects of UNEs in various markets, and that analysis, particularly regarding the impact of UNE-P on investment in facilities, could swing any of the commissioners in different directions. (The review is at an early stage as the staff is currently immersed in evaluating 17 pending Sec. 271 applications.) But some of the dynamics affecting the UNE-P policy process are already apparent.

FCC Direction: Set Out Path for Gradual Elimination of UNE-P. We believe that the FCC is likely to view UNE-P as a transitional vehicle to more facilities-based competition. We also believe that the Commission views the D.C. Circuit's May 24 *USTA v. FCC* ruling on UNEs favoring the ILECs, as subjecting any decision to eliminate an element on a national basis to a material legal risk. In that light, we believe the Commission is likely to view its job in the Triennial Review not as deciding whether to keep or eliminate UNE-P, but rather to set forth the right balance of incentives and market signals for creating a glide path from UNE-P to facilities-based competition.

Transitional Tools: Sunsets and Triggers. There are two basic ways the Commission could act. First, it can eliminate UNE-P at a date certain (a "sunset"). While that approach provides the most market certainty, it is legally vulnerable. Critics could attack an FCC projection of future market conditions as not reflecting the requirement that competitors' should be able to gain access to network elements without which their ability to compete would be "impaired." One way to mitigate the legal risk is to provide a "soft" sunset in which the date merely creates a presumption that the FCC would act to eliminate UNE-P. While such a rule is more defensible, it provides less certainty to the market and the companies, effectively delaying the ultimate debate for another day; a day, it is worth noting, in which the composition of the Commission and the market structure of the telecom industry could be very different.

The second method is to provide "triggers" by which the Commission would measure whether access to switching, or the UNE-P platform, is no longer needed. These could include competitive metrics, such as a market share loss, or technical prerequisites to a healthy unregulated wholesale market, such as electronic loop provisioning. Triggers would be stronger legally but would retain market uncertainty about the long-term prospects of UNE-P. Further, there is a question as to whether the federal or state regulators would have the task of doing the fact finding on the triggers, a decision that could further impact the timing of when and whether the trigger is actually pulled.

Another way of transitioning away from UNE-P is to continue to require the Bells to provide access to the platform but to no longer require TELRIC pricing. Rather, the price could be set by the states as a tariff that would have to be "just and reasonable." While this would probably increase the cost to competitors, it would likely involve lengthy litigation and regulatory delay.

We believe the debate over UNE-P will ultimately move to a debate about this transition. In such a debate, just like the legislative and regulatory debate over the 14-point checklist for Bell long-distance entry, details are critical. Also, just as with the legislative and subsequent regulatory fights over Section 271, the significance of the details is both a market structure issue (that is, how will the market look when the transition is over) and a timing issue (that is, how long will it take for the sunset to occur or the trigger to take affect.) The Bells will be arguing for fast, certain and limited transitional elements; their opponents will argue for the opposite. The critical point, from our perspective, is that adoption of sunsets or triggers will not end the debate; rather, just as with Section 271, it changes the debate but inevitably leads to a longer time period before a material change in the current status.

Eliminating UNE-P Quickly: The Bells have some hope The Bells still have some hope of either eliminating or quickly transitioning away from UNE-P. This is particularly true regarding switching for business offerings. First, we note that the analysis for using UNE-P to serve business and residential customers is different. We believe the FCC is more sympathetic to the Bell's case for paring back unbundled switching in business markets, as competitors have installed numerous switches to serve such customers. Such installations call into question whether new entrants' ability to compete in business markets would be impaired without unbundled switching. We think the FCC generally wants to cut back on the use of UNE-P for business customers. It could rule, for example, that the current exemption of unbundled switching for customers with four or more lines should apply in all markets, and not just the top 50. An alternative approach would be to have a trade-off between the number of lines and the market size, such as an exemption for the smaller markets (i.e., markets 50 through 100) where the line count was greater (i.e., 12 lines or higher.) A key political issue here is whether small business advocacy groups, which generally do not engage in telecom policy debates, will fight any further restrictions on the use of UNE-P.

Regarding UNE-P generally, FCC Chairman Michael Powell and other key policymakers have expressed a preference for facilities-based competition. Some officials believe that UNE-P does not really provide sustainable, new benefits to consumers and therefore should eventually be eliminated. The Bells will use their depressed stock prices and earnings to argue that the economics of UNE-P will cripple the last remaining strong players in the telecom sector, ILECs, and thereby threaten network investment and reliability. Market trends toward the end of the decision-making process could affect the details of the transition that the FCC ultimately chooses. The Bells will also benefit from the reduced political firepower of the IXC/CLEC sector. With WorldCom and others under enormous financial constraints, the competitors' ability to utilize a battalion of lawyers, lobbyists and economists to shape the debate is reduced. Moreover, some in the telecom manufacturing community and Silicon Valley are likely to join the Bells in pushing for regulatory relief as they fear maintenance of the status quo will exacerbate the cuts in telecom capital spending. Finally, the Bells might be successful in some of the court challenges to the specific state rate settings.

But a quick kill of UNE-P is an uphill battle . In addition to having to make persuasive policy arguments, the Bells will have to overcome a number of political hurdles to succeed.

The Bells can't win everything and broadband relief is easier politically than eliminating UNE-P in a flash cut. The FCC has teed up numerous telecom rulemakings but at their core, they will address two fundamental issues: how to regulate the current Bell network to enable telephony competition and how to regulate the Bell network as it offers broadband. While these issues raise many separate policy decisions, and while we believe the Bells are likely to improve their position as a result of the proceedings, it is a basic rule of Washington that no one wins everything. We think it unlikely that the Bells will get what they want on both broad sets of issues. For a number of reasons, we think it is easier for the FCC to grant the Bells relief on broadband than UNE-P. Given the precedents, radically changing the UNE rules now would be more disruptive than clarifying broadband rules. Chairman Powell welcomed the Supreme Court's May decision in the TELRIC case by saying it was good because it finally gave some certainty to the pricing issues. While every chairman has an opportunity to change the direction of FCC policy, it would be improbable for Mr. Powell to change direction on some of the FCC's core current policies, given his view on the value of certainty. Further, even if the FCC did adopt new rules for implementing TELRIC, it is unlikely the FCC would require all states to immediately redo their existing rates.

Just as important, it is easier to provide the Bells relief for investments in networks for new, broadband services than to grant them relief in a way that immediately raises competitors' costs to the point at which they would have to drop their voice services or dramatically raise prices for millions of customers. An FCC move to scrap UNE-P in a flash cut could spark a consumer and political backlash -- and the potential force of such a backlash is growing. By adding hundreds of thousands of new local customers (and possibly millions by the time of a decision), the latest WorldCom and AT&T local offensives are changing the facts on the ground and increasing the risks for the Commission.

Moreover, broadband regulation was not as fully debated at the time of the Act. Therefore, in combination with the fact that cable is winning the majority of broadband connections, there is more sympathy for the Bells position on deregulating investments in new services. Certain changes, such as deregulating access to remote terminals, faces limited political opposition as so few CLECs are actually seeking such access. This is not to suggest that the Bells will easily win everything they seek in the broadband proceedings. There are a number of issues, such as the impact on universal service, that are causing great concern at the agency and on Capitol Hill. Nonetheless, we think it will be generally easier for the Commission to grant some relief for the Bells in how they invest in the broadband networks of tomorrow than give relief that eliminates existing consumer choices today.

Even if the Bells win at the federal level, they will have a difficult time prevailing in the states. If the Bells succeed at the FCC in changing TELRIC or eliminating unbundled switching, we believe it is likely that they will meet stiff resistance in the states, particularly those states that have seen significant market penetration through UNE-P. A number of state regulators have already suggested that they view the FCC decisions regarding what constitutes a UNE as essentially advisory. If the FCC eliminates UNE requirements, many state commissions believe they have a right to retain existing UNE rules under prior state regulatory orders or state law. Many states have implemented unbundling as part of a price-cap/alternative-regulation plan. Some states are going to be reluctant to eliminate the platform for what they see as the only serious competition benefiting Bell consumers. While the Bells would like the FCC to preempt the states, the Bells own position on states' rights in the early days of the implementation of the Act gives the FCC plenty of political cover for not intervening. Further, Republicans generally are more reluctant to preempt the states. The FCC has recently taken action, such as in the Customer Proprietary Network Information (CPNI) proceeding, to explicitly welcome state modification of FCC rules. Any effort by Chairman Powell to preempt state action is likely to cause a negative reaction by some who are generally supportive of him.

We also note an FCC move to pare back UNE-P requirements would be subject to immediate legal challenge from the states and local competitors. Of course, the Bells could also challenge an FCC decision that they believe does not go far enough. Either way, however, we believe both the FCC and the Courts are likely to favor maintaining the status quo to avoid market disruptions until the case is definitively resolved, which could take two or three years.

Attacking UNE-P changes the principal Bell message of deregulating broadband. For the last several years, the Bells have been trying to have their broadband investments deregulated, principally through the Tauzin-Dingell legislation, which passed the House but has stalled in the Senate. By focusing on advocating for new rules for new investments, they sent a message to government officials that deregulating competitors' access to the current telephone network, while welcome, was of a lesser priority. While the Bells see no policy contradiction in asking for both broadband relief and UNE-P, in terms of their political message, the Bells' intensified drumbeat on UNE-P adjusts their message in a way that we believe inevitably makes it less effective.

The UNE-P debate forces the regulators to confront how they will stimulate competition and the Bells to confront how they want to be treated. The UNE-P debate is particularly important, as the decisions will shape both market structure and investment incentives for all telecom players.

The debate forces regulators to confront whether they are willing to wait for full, inter-modal competition or feel the need to generate a greater competitive dynamic now. The great hope of regulators is that cable and wireless will fully compete some day with the wired phone network eliminating the need for much regulation. While cable modem service and wireless have affected the provision of non-primary residential phone lines, they have not yet affected primary residential lines in a way that we believe would cause regulators to conclude that regulation is no longer necessary. Moreover, given the current capital constraints on cable and on the non-Bell-affiliated wireless companies, the regulators have to question how long it will be before full facilities-based competition is available.

The debate forces the Bells to confront how they want to be treated. The Bells want to be deregulated, preferably without having to face any significant competition for their primary line service. We believe such a goal, however, is unrealistic. We do not think they will be successful on either the federal or state level in advocating for deregulation without primary line competition. If the Bells are successful in eliminating UNE-P, we think it will mean continued retail regulation at the state level, which will also have the affect of distorting investment incentives for the Bells. For example, one alternative is for the Bells to accept the UNE-based competition and then challenge the state retail regulation. Certainly the Bells could argue that if the wholesale rules are working well, there is no need for retail regulation. This approach was adopted by VZ in New York where, in effect, VZ received a $2 month increase in residential phone rates in exchange for TELRIC rate decreases. For the Bells, this tactic at least has the merits of keeping a significant percentage of the revenue in the Bell network. While we don't believe the Bells will adopt this approach, we note it to suggest that the critical question is not whether the Bells' core telephone network will be deregulated -- it is how it will be regulated until facilities-based competition for its primary lines spreads more broadly, and then what will the Bell revenue stream look like when that happens.

In this regard, we note that while UNE-P does in the short term hurt Bell economics, in the long term, the Bells do have significant defenses against such competition. As noted above, VZ, the leading Bell in long-distance entry, has already proven it can stop the tide of UNE-P line encroachment. We believe VZ's intensified efforts to sell bundles will help even more. We think the other Bells are likely to follow VZ's lead in using bundles as a defense to UNE-P. (For a review of the Bell advantages in Bundling see our report, *The Battle of the Bundles* , June 2002.)

The Bells' real nightmare - cable using UNE-P to ramp up. Ed Whitacre, CEO of SBC, said that AT&T and WorldCom were "abusing" UNE-P because they had no intention of building their own facilities. We note that while UNE-P is no doubt having a negative impact on the Bells, it would be far more damaging for the Bells if a facilities-based competitor, most notably cable companies, used UNE-P to attract a sufficient number of customers to justify the incremental investments in their own networks, to build up their back office systems and marketing while generating revenues, and then to migrate the customers entirely off the Bell network. While we have no indication that anyone in the cable industry is contemplating such a strategy, (though SBC has asked the FCC to prohibit the merged Comcast/ AT&T Broadband cable company from using UNE-P) and we believe any such move by cable could set off a heightened political battle in which the Bells would receive greater deregulation, we note that UNE-P presents a way for cable companies to ramp up their telephony business in a more capital-efficient manner while being consistent with the ultimate goal of facilities-based competition. We also note that in the long-run, the continued growth of wireless and data will take an increasing share of telecom revenues.

Investment Rating B-Buy H-Hold S-Sell
Risk Rating: 1-Low 2-Average 3-High

that upside in the share price is limited. SELL - We expect this stock to underperform the S&P 500 by more than 10% over the next 12 months and believe the stock could decline in value. We also use a Risk rating for each security. The Risk ratings are Low, Average, and High and are based primarily on the strength of the balance sheet and the predictability of earnings.

UNE-P: Impacts and Implications

Prepared for the
Federal Communications Commission

SBC Communications Inc.

Agenda

Overview	**Ed Whitacre**
Financial Review	**Randall Stephenson**
- Financial Trends - UNE-P Impacts	
Summary	**Bill Daley**

Overview

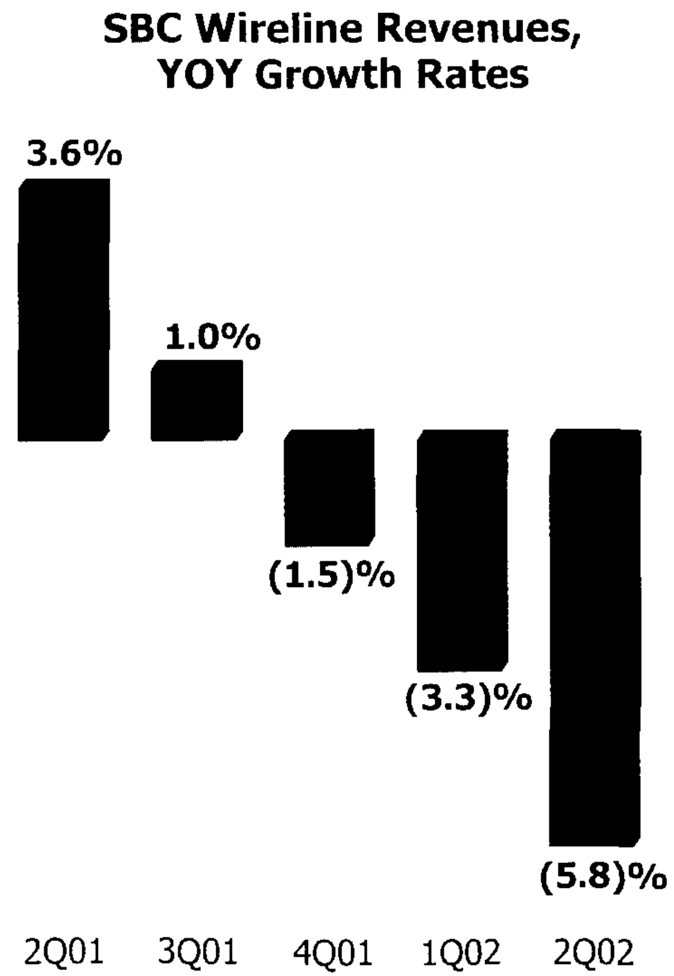
Ed Whitacre
Chairman and Chief Executive Officer
SBC Communications Inc.

Financial Review

- **Financial Trends**
- UNE-P Impacts

Randall Stephenson
Chief Financial Officer
SBC Communications Inc.

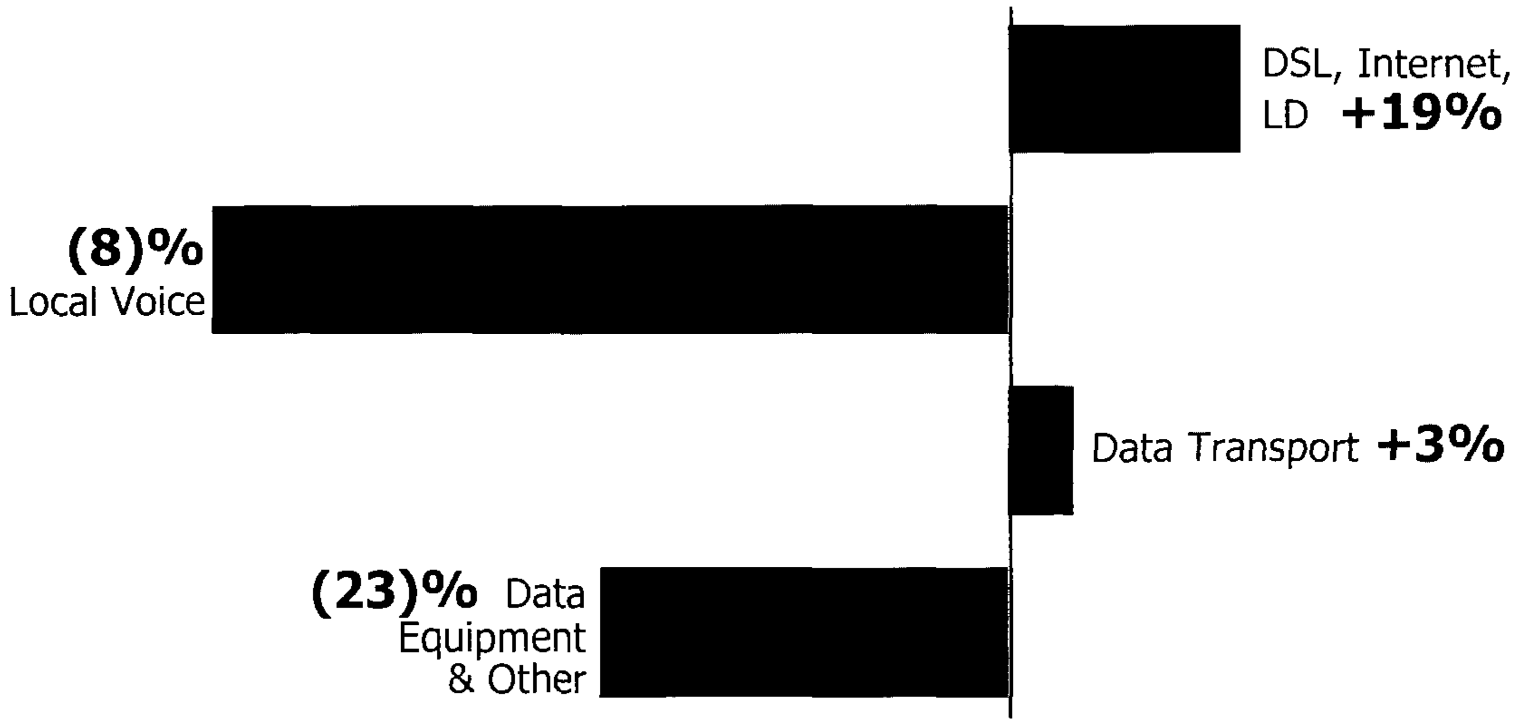
Wireline Revenues



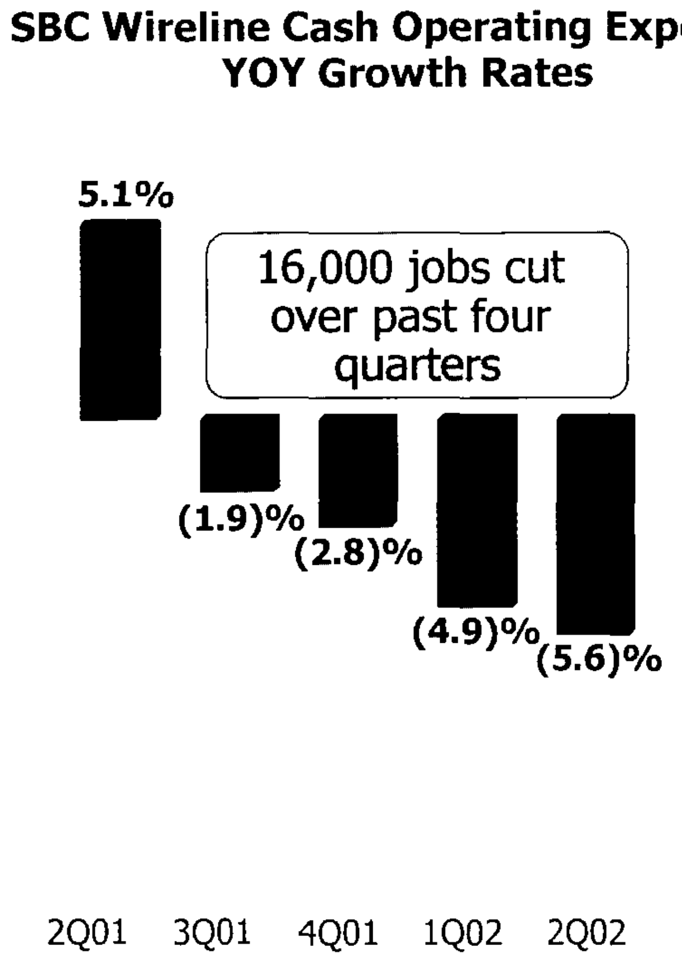
- Down more than $1 billion over the past three quarters.
- More than half of that loss came in the most recent quarter.
- Assuming annual revenue declines continue at current pace (5.8)% -- no further acceleration -- over the next four quarters, we will lose another $2.3 billion from our wireline revenue stream.

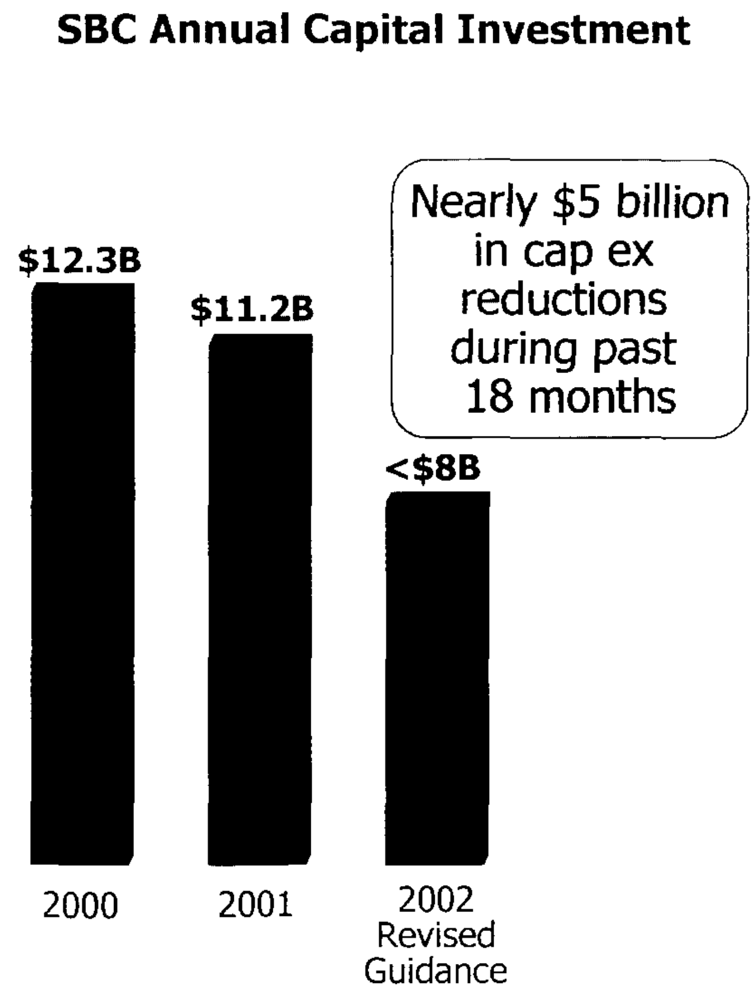
Local Voice Driving Revenue Decline

2Q02/2Q01 Changes By Product Group



Cutbacks in Jobs and Investment





A Shrinking Business

SBC Wireline Results

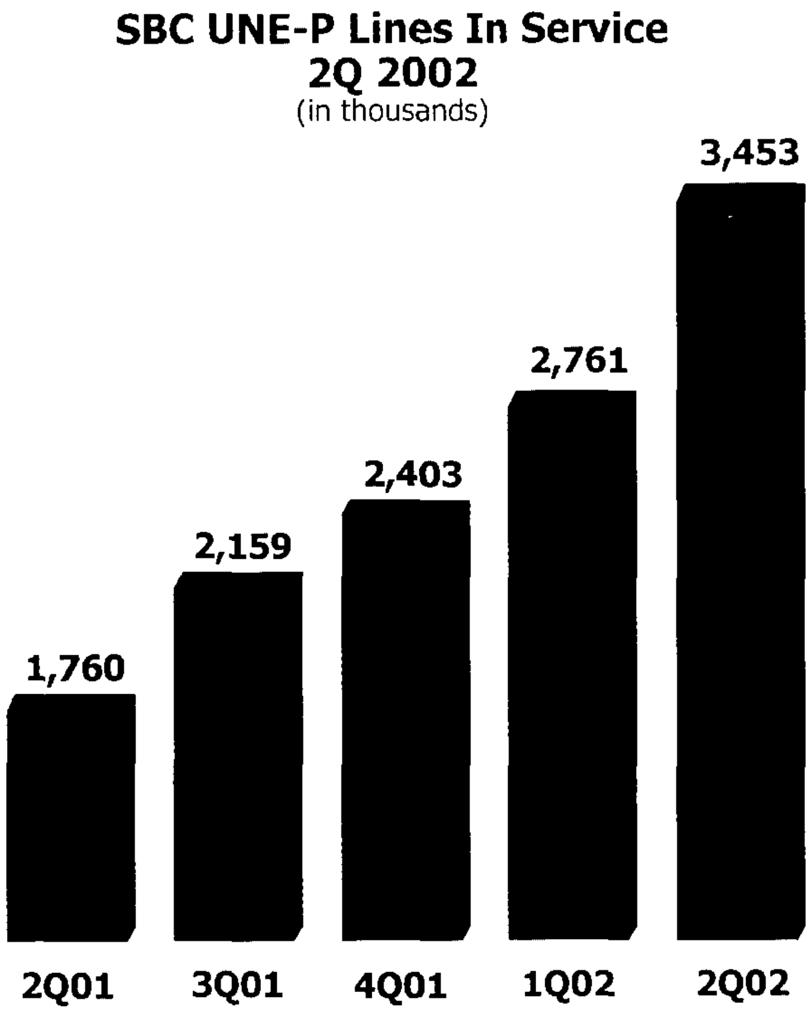
	2Q02/2Q01
Revenues	(5.8)%
Cash Operating Expenses	(5.6)%
Depreciation & Amortization	1.2%
Operating Income	(12.6)%
Capital Investment	(41)%

Financial Review

- Financial Trends
- **UNE-P Impacts**

Randall Stephenson
Chief Financial Officer
SBC Communications Inc.

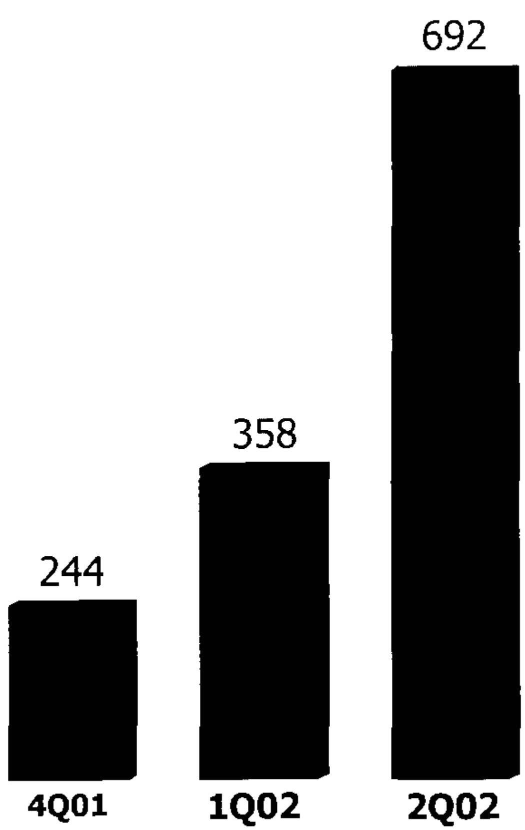
UNE-P Adoption



- Over the past year, UNE-P lines in service have doubled.
- We have lost 3.5 million lines... nearly equivalent to losing the state of Ohio.
- SBC still has 1 million resale lines likely to be converted to UNE-P.
- SBC's market share is currently 85%. Projected to be 66% by end of 2003.

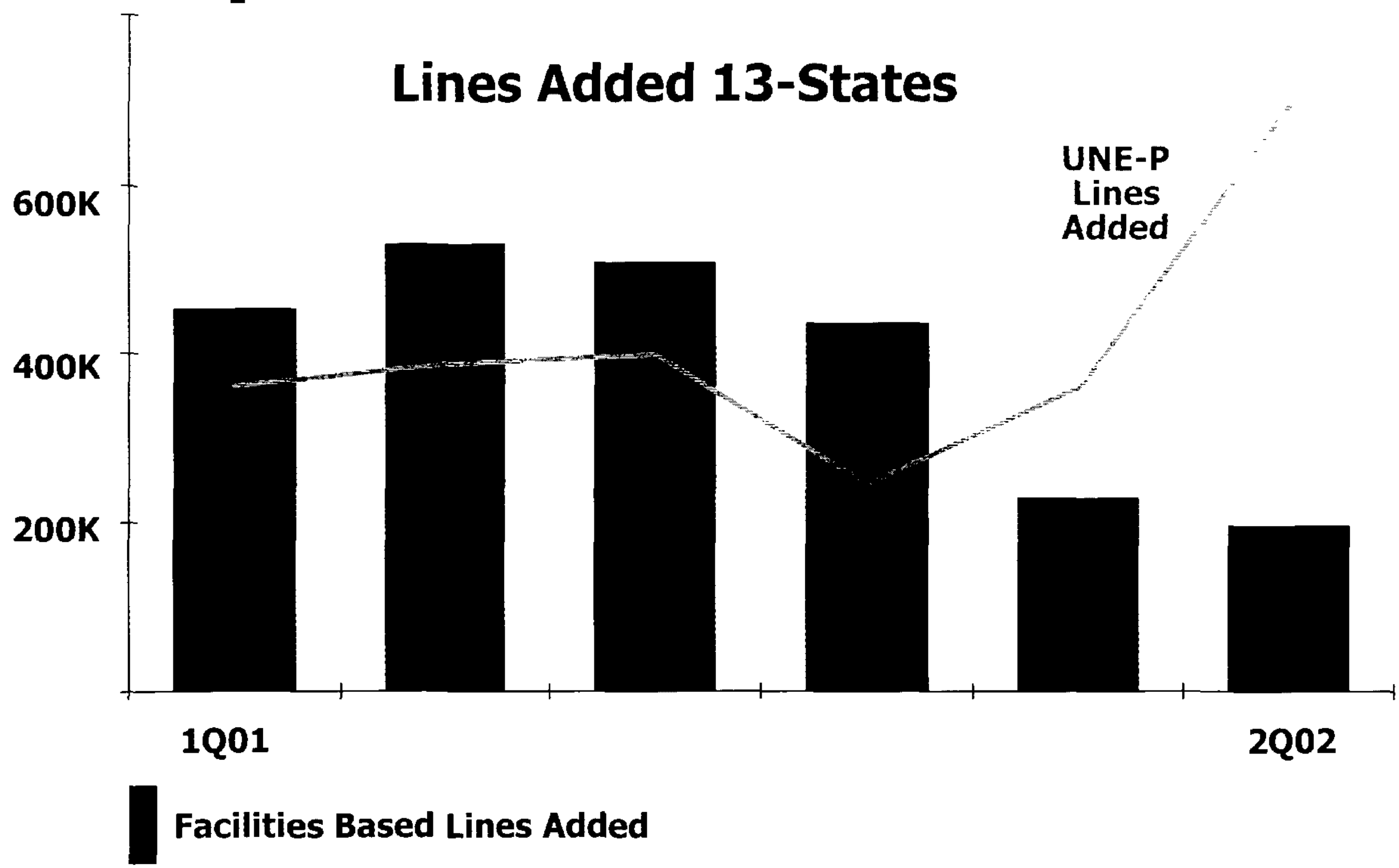
UNE-P Acceleration

SBC UNE-P Lines Added Per Quarter – 13 States
(in thousands)



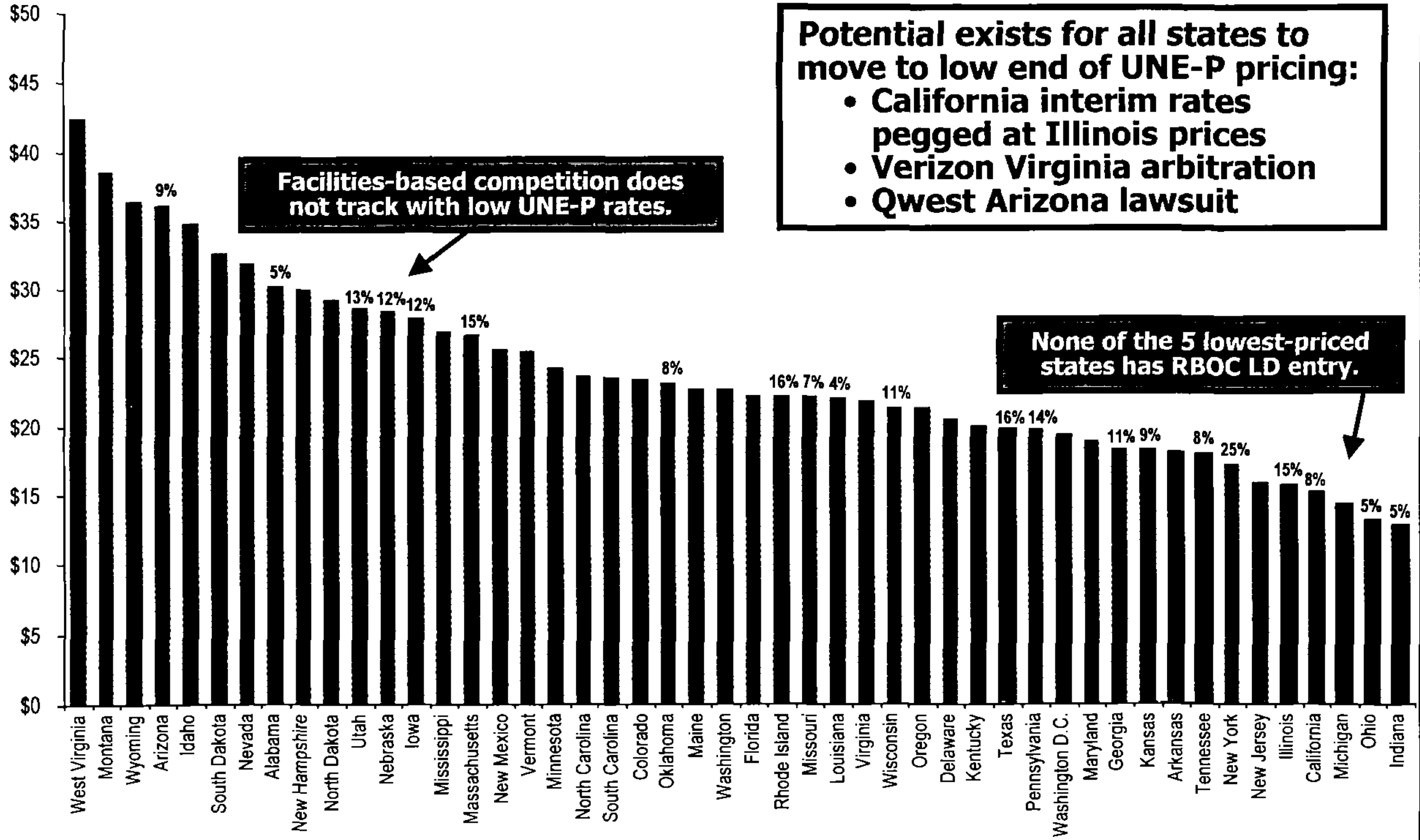
- SBC loses 12,000 lines per day to UNE-P. Projected to be 29,000 per day by end of 2003.
- UNE-P lines added in 2Q02 were more than 70% greater than any previous quarter.
- As states have dropped prices, facilities-based competition has lagged and UNE-P has become the dominant means to compete with SBC.

Competition Trends



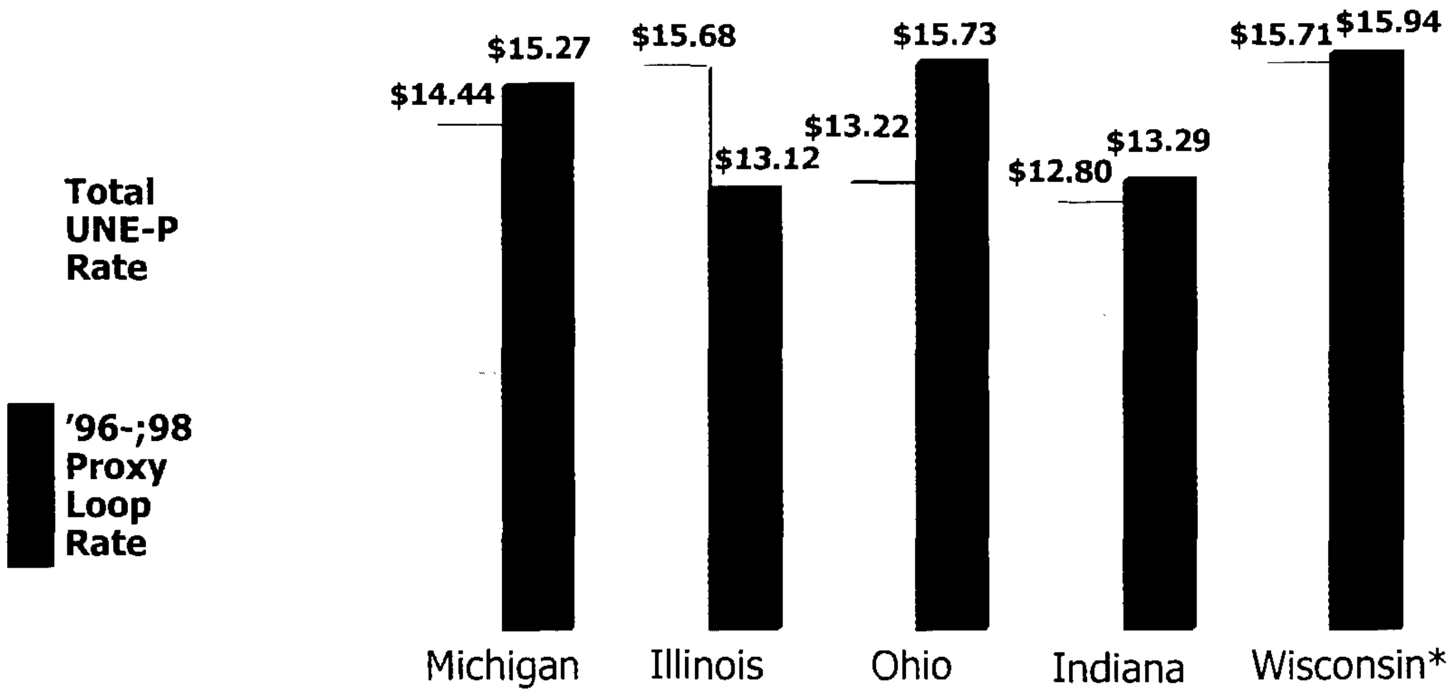
The Five Lowest-Priced UNE-P States Are All SBC Markets

Potential exists for all states to move to low end of UNE-P pricing:
- **California interim rates pegged at Illinois prices**
- **Verizon Virginia arbitration**
- **Qwest Arizona lawsuit**



Percentage of end-user switched access line served by reporting competitive local exchange carriers *source:* FCC Industry Analysis Division Common Carrier Bureau. "Local Telephone Competition: Status as of December 31, 2001"

UNE-P Rates vs FCC Proxy Loop Rates



* Estimated impact of pending order.

IXCs Exploit Very Large UNE-P Discounts

	Total Recurring UNE-P Rate*	Discount From Retail Residential	Below Non-SBC National Ave
Illinois	$15.68	55%	39%
Michigan	$14.44	63%	44%
Ohio	$13.22	57%	48%
Indiana	$12.80	62%	50%
California	$15.24	47%	40%
Wisconsin**	$15.71	48%	39%

All have recently ordered lower prices

* Per Anna Marie Kovacs of Commerce Capital Markets, Inc. May report on UNE-P adjusted to reflect only recurring rates and recent rate changes.

** Estimated impact of pending order.

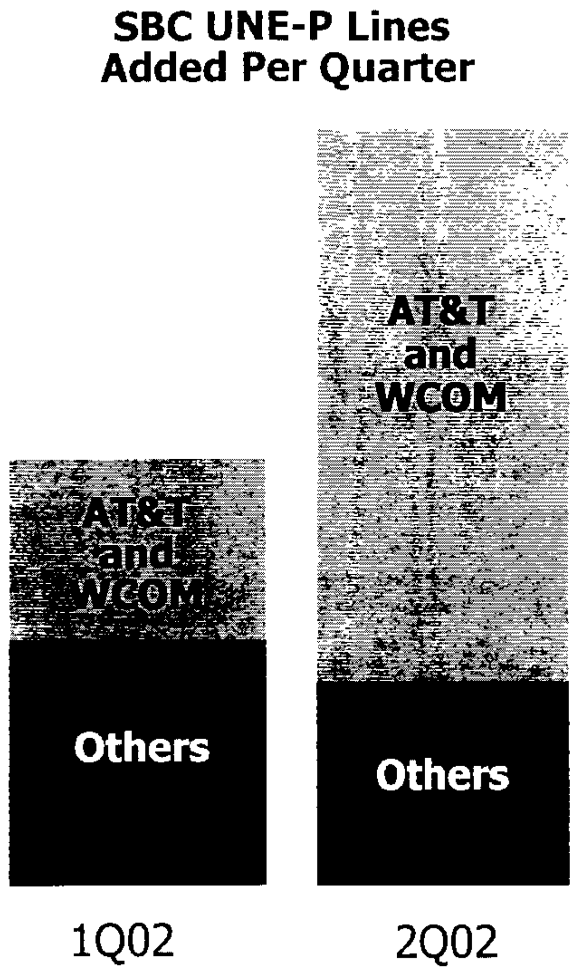
Simple Margin Transfer With No Investment

	Ameritech Consumer 5-State Averages		
	SBC Retail	SBC UNE-P	IXC Using SBC UNE-P
Revenue	$36	$15	$41
Expenses	*$26	*$26	**$23
Operating Margin	$10	$(11)	$18
Capital Investment	$1,100	$1,100	$0
Capital Investment	✓	✓	
Service Quality Regulated	✓	✓	
Universal Service Provider	✓	✓	

* Excludes cost associated with data services.

** UNE-P plus 20% SG&A.

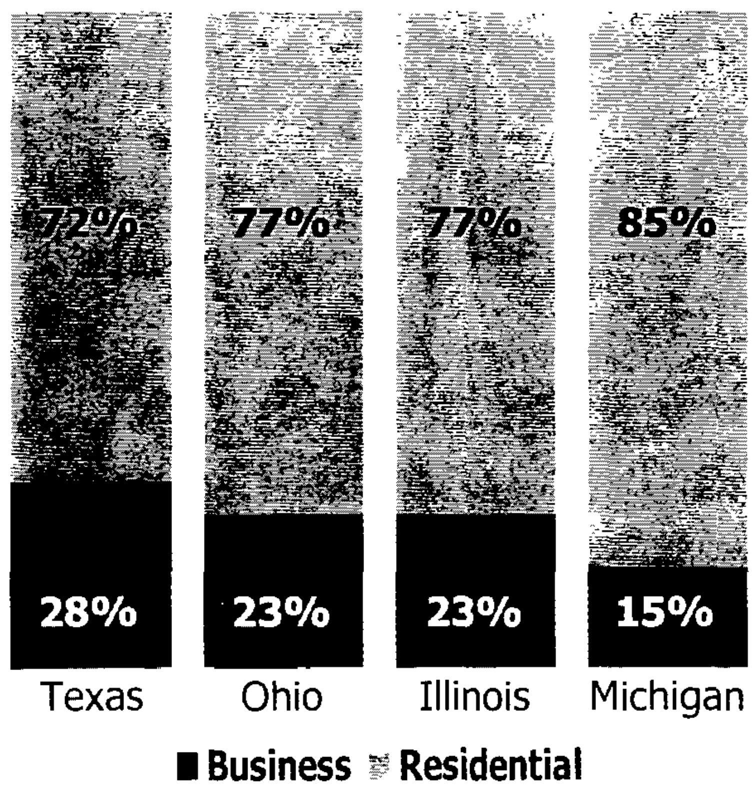
UNE-P Predominantly Used by the Two Largest IXCs



- More than 70% of SBC's UNE-P lines added in 2Q02 were for the two largest IXCs.
- From 1Q02 to 2Q02, UNE-P lines added for AT&T and WorldCom/MCI tripled while UNE-Ps added for others actually declined.
- WorldCom receivables to SBC and its affiliates have grown to more than $400 million.

Dominant Use of UNE-P: To Target Residential Customers

SBC UNE-P Lines In Service
SBC's Four Largest UNE-P States



- Across SBC's 13 states, more than 70% of all UNE-P lines are residential.
- In SBC's four largest UNE-P states, which have been targeted most aggressively by the large IXCs, residential customers represent an even higher percentage of total UNE-Ps.

IXC Lead Offers
(Ameritech states)

AT&T

- **Pricing: $52.57 ***
- **Local Service**
  - Access line
  - Calling features (3)
- **Long Distance**
  - Unlimited to other AT&T residential consumers

MCI/WCOM

- **Pricing: $49.99 ***
- **Local Service**
  - Access line
  - Calling features (5)
- **Long Distance**
  - Unlimited long distance calling

* Pricing includes interLATA long distance but excludes Subscriber Line Charge and other miscellaneous taxes and fees.

Source: Company's website
- MCI's offer is their lead offering "Neighborhood Complete" at $49.99
- AT&T's offer includes their lead local "Call Plan Unlimited with 3 Feature Package Enhanced" at $29.95-34.95 and their long distance offer "Unlimited Plan" at $19.95. Offered in Il, OH and MI.

SBC Provides Residential Universal Service While IXCs "Cherry Pick" Profits

IXC offers target premium customers rather than universal service.

Ameritech Residential Customer Spending

		Ave Rev per Line	% of Total SBC Revenue	% of Total SBC Profit
IXCs	Quartile 1	$43-$54	36%	72%
IXCs	Quartile 2	$36-$43	29%	41%
SBC	Quartile 3	$24-$36	21%	9%
SBC	Quartile 4	$0-$24	14%	(22)%

SBC's resulting customer base will be unprofitable, with no funds for investment.

Clear IXC Strategy

No Capital Investment

"... gives AT&T Consumer unmatched leverage to create offers ... without making economic sacrifices."

Betsy Bernard,
President, AT&T Consumer

"We're profitable everywhere we sell because we limit ... where we sell based on cost.... [W]e're deploying very little capital to make it work."

Wayne Huyard
COO, MCI

"We do not expect that the growth of our business will require the levels of capital investment in fiber optics and switches that existed in historical telecommunications facilities-based models."

10-Q Filing
Z-Tel

High Margins, Low Risk

"Our principle of maximizing cash requires that we only enter states that meet our gross margin requirements."

"We are not going into states where we don't have a gross margin of 45% on the local ...."

Betsy Bernard,
President, AT&T Consumer

Capital Market Reaction

Stock Prices

	Before UBS Warburg Report (08/19/02)	After UBS Warburg Report (08/23/02)	Percent Change
SBC	$29.87	$26.30	(12.0)%
AT&T	$10.76	$12.22	13.6%

"We believe SBC has the most attractive region for UNE-P providers. SBC takes the hardest hit for each retail line lost to UNE-P competitors ... SBC has lost more retail lines to UNE-P than any other Bell, at 3.45 million... [and we] expect SBC to lose 1 million retail lines to UNE-P in the third quarter of 2002."

- UBS Warburg

Summary

Bill Daley
President
SBC Communications Inc.

Impacts

- Reduced Service Quality
- Reduced Ability to Provide Service to all Customers
- No Incentive To Invest in Networks
- Eliminated Jobs
- Slower Deployment of New Services
- Increased Cost of Capital
- Weakened Equipment Suppliers

Next Steps

- Current regulatory regime regarding UNE-P and pricing is unsustainable
- Turmoil in industry calls for quick and decisive action
- As long as we have carrier of last resort obligations, prices must be set to recover our costs
- There are many ways to solve this problem, but time is extremely short. Whatever direction the FCC moves, it must be effective in a very short period of time